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=> d his

     (FILE 'HOME' ENTERED AT 14:45:51 ON 19 AUG 2003)

     FILE 'REGISTRY' ENTERED AT 14:46:00 ON 19 AUG 2003
L1                STRUCTURE UPLOADED
L2              5 S L1 SSS SAM
L3            102 S L1 SSS FULL

     FILE 'CAPLUS, MEDLINE' ENTERED AT 14:59:56 ON 19 AUG 2003
L4             47 S L3
L5              0 S L3 AND PHOSPHORAMIDITE NUCLEOSIDE
L6              3 S L3 AND PHOSPHORAMIDITE
L7              3 DUP REM L6 (0 DUPLICATES REMOVED)
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d his

     (FILE 'HOME' ENTERED AT 14:45:51 ON 19 AUG 2003)

     FILE 'REGISTRY' ENTERED AT 14:46:00 ON 19 AUG 2003
L1             STRUCTURE UPLOADED
L2               5 S L1 SSS SAM
L3             102 S L1 SSS FULL

     FILE 'CAPLUS, MEDLINE' ENTERED AT 14:59:56 ON 19 AUG 2003
L4              47 S L3
L5               0 S L3 AND PHOSPHORAMIDITE NUCLEOSIDE
L6               3 S L3 AND PHOSPHORAMIDITE
L7               3 DUP REM L6 (0 DUPLICATES REMOVED)
L8               3 S L3 AND PHOSPHORAMIDITES
L9              30 S L3 AND NUCLEOSIDE
L10              5 S L9 AND PHOSP?

     FILE 'REGISTRY' ENTERED AT 15:20:31 ON 19 AUG 2003
L11            STRUCTURE UPLOADED
L12              0 S L11 SSS SAM
L13              5 S L11 SSS FULL

     FILE 'CAPLUS, MEDLINE' ENTERED AT 15:22:22 ON 19 AUG 2003
L14              6 S L13

     FILE 'REGISTRY' ENTERED AT 15:22:53 ON 19 AUG 2003
L15              5 DUP REM L13 (0 DUPLICATES REMOVED)

     FILE 'CAPLUS, MEDLINE' ENTERED AT 15:23:15 ON 19 AUG 2003

     FILE 'CAPLUS, MEDLINE' ENTERED AT 15:23:31 ON 19 AUG 2003
L16              6 S L13

     FILE 'REGISTRY' ENTERED AT 15:29:48 ON 19 AUG 2003
L17            STRUCTURE UPLOADED
L18              0 S L17 SSS SAM
L19              0 S L17 SSS FULL

     FILE 'REGISTRY, BEILSTEIN, USPATFULL, CA, CHEMCATS' ENTERED AT 15:34:47
     ON 19 AUG 2003
L20             91 S L3
L21              4 S L20 AND PHOSPHORAMIDITE
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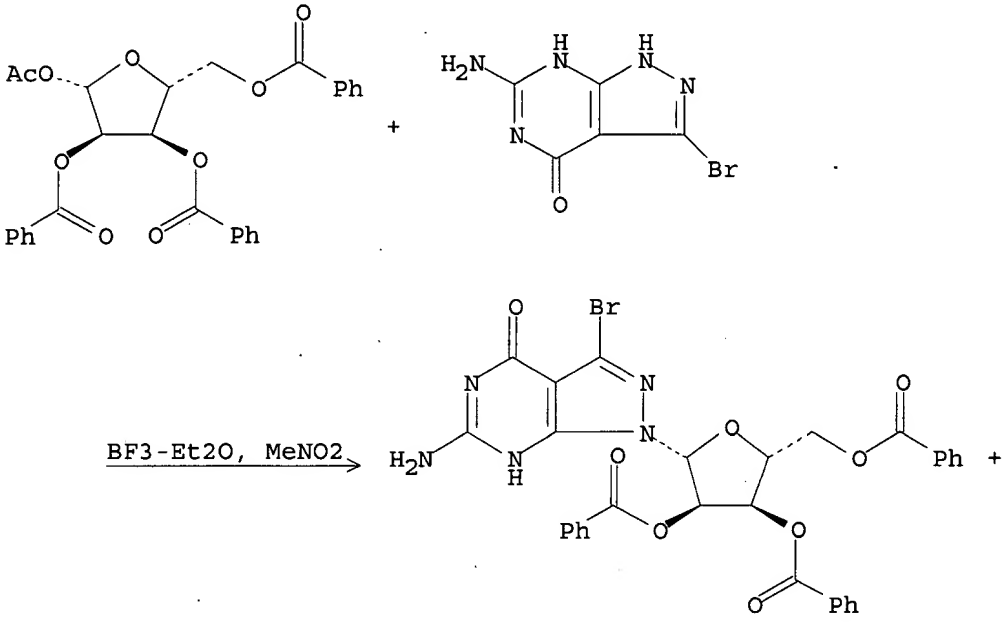
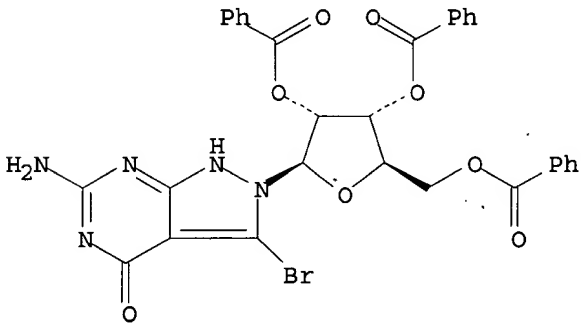
L18 1 ANSWERS CASREACT COPYRIGHT 2003 ACS on STN

TI Synthesis and biological activity of 6-azacadeguomycin and certain 3,4,6-trisubstituted pyrazolo[3,4-d]pyrimidine ribonucleosides

RX(8) OF 84



RX(8) OF 84



ALL ANSWERS HAVE BEEN SCANNED

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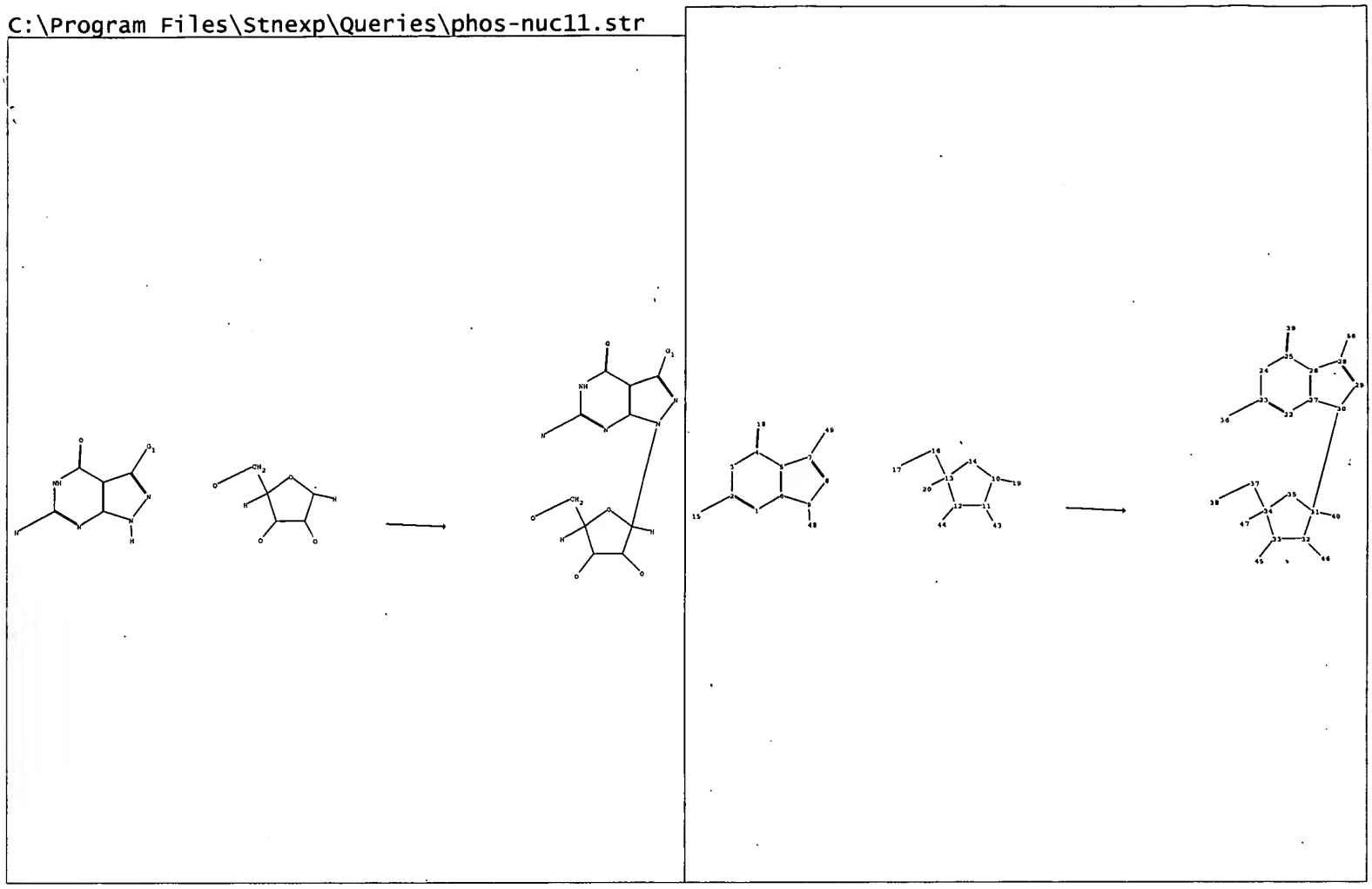

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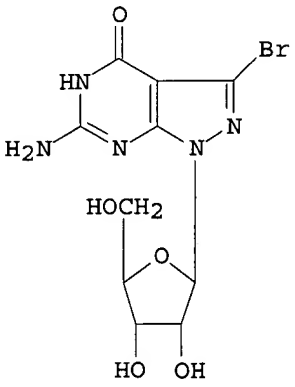
15 16 17 18 19 20 36 37 38 39 40 43 44 45 46 47 48 49 50
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 22 23 24 25 26 27 28 29 30 31 32
33 34 35
chain bonds :
2-15 4-18 7-49 9-48 10-19 11-43 12-44 13-16 13-20 16-17 23-36 25-39 28-50
30-31 31-40 32-46 33-45 34-37 34-47 37-38
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 10-11 10-14 11-12 12-13 13-14 22-23
22-27 23-24 24-25 25-26 26-27 26-28 27-30 28-29 29-30 31-32 31-35 32-33 33-34
34-35
exact/norm bonds :
1-2 1-6 2-3 2-15 3-4 4-5 4-18 5-6 5-7 6-9 7-8 7-49 8-9 10-11 10-14 11-12
11-43 12-13 12-44 13-14 22-23 22-27 23-24 23-36 24-25 25-26 25-39 26-27 26-28
27-30 28-29 28-50 29-30 30-31 31-32 31-35 32-33 32-46 33-34 33-45 34-35
exact bonds :
9-48 10-19 13-16 13-20 16-17 31-40 34-37 34-47 37-38

G1:Cl,Br,I

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS
22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom 31:Atom
32:Atom 33:Atom 34:Atom 35:Atom 36:CLASS 37:CLASS 38:CLASS 39:CLASS 40:CLASS
43:CLASS 44:CLASS 45:CLASS 46:CLASS 47:CLASS 48:CLASS 49:CLASS 50:CLASS
fragments assigned reactant role:
containing 1
containing 10
fragments assigned product role:
containing 22

L18 ANSWER 1 OF 1 CASREACT COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 103:37693 CASREACT
TITLE: Synthesis and biological activity of 6-azacadeguomycin and certain 3,4,6-trisubstituted pyrazolo[3,4-d]pyrimidine ribonucleosides
AUTHOR(S): Petrie, Charles R., III; Cottam, Howard B.; McKernan, Patricia A.; Robins, Roland K.; Revankar, Ganapathi R.
CORPORATE SOURCE: Cancer Res. Cent., Brigham Young Univ., Provo, UT, 84602, USA
SOURCE: Journal of Medicinal Chemistry (1985), 28(8), 1010-16
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



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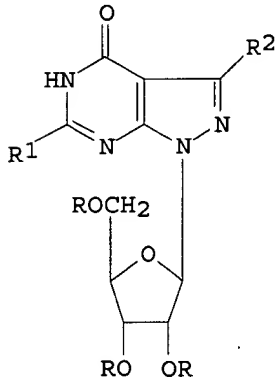
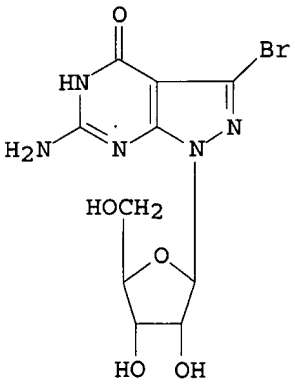


II

AB High-temp. glycosylation of 3,6-dibromoallopurinol with 1-O-acetyl-2,3,5-tri-O-benzoyl-D-ribofuranose in the presence of BF3.cntdot.OEt2, followed by ammonolysis, provided nucleoside I. Similar glycosylation of either 3-bromo-4(5H)-oxopyrazolo[3,4-d]pyrimidin-6-yl Me sulfoxide or 6-amino-3-bromopyrazolo[3,4-d]pyrimidin-4(5H)-one, and subsequent ammonolysis, also gave I. Application of this glycosylation procedure to 6-(methylthio)-4(5H)-oxopyrazolo[3,4-d]pyrimidine-3-carboxamide gave the corresponding N-1 glycosyl deriv. II (R = Bz, R1 = SMe, R2 = CONH2)(III). Dethiation and debenzoylation of III provided an alternate route to the recently reported 3-carbamoylallopurinol ribonucleoside. Oxidn. of III and subsequent ammonolysis afforded 6-amino-1-.beta.-D-ribofuranosyl-4(5H)-oxopyrazolo[3,4-d]pyrimidine-3-carboxamide (IV) which on alk. treatment gave 6-azacadeguomycin II (R = H, R1 = NH2, R2 = CO2H). Acetylation of IV, followed by dehydration with phosgene, provided the versatile intermediate II (R = Ac, R1 = NH2, R2 = cyano) (V). Deacetylation of V gave 6-amino-1-.beta.-D-ribofuranosyl-4(5H)-oxopyrazolo[3,4-d]pyrimidine-3-carbonitrile. Reaction of V with H2S gave II (R = H, R1 = NH2, R2 = CSNH2). All of these compds. were tested in vitro against certain viruses and tumor cells. Among these compds., the guanosine analogs I and II (R = H, R1 = NH2, R2 = cyano) showed significant activity against measles in vitro and exhibited moderate antitumor activity in vitro against L1210 and P388 leukemia. 6-Azacadeguomycin and all other compds. were inactive against the viruses and tumor cells tested in vitro.

L18 ANSWER 1 OF 1 CASREACT COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 103:37693 CASREACT
TITLE: Synthesis and biological activity of 6-azacadeguomycin and certain 3,4,6-trisubstituted pyrazolo[3,4-d]pyrimidine ribonucleosides
AUTHOR(S): Petrie, Charles R., III; Cottam, Howard B.; McKernan, Patricia A.; Robins, Roland K.; Revankar, Ganapathi R.
CORPORATE SOURCE: Cancer Res. Cent., Brigham Young Univ., Provo, UT, 84602, USA
SOURCE: Journal of Medicinal Chemistry (1985), 28(8), 1010-16
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



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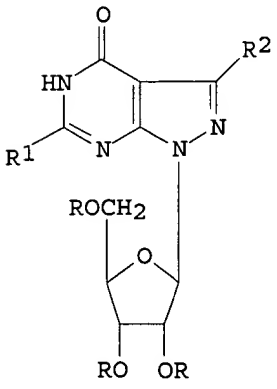

II

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L18 ANSWER 1 OF 1 CASREACT COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 103:37693 CASREACT
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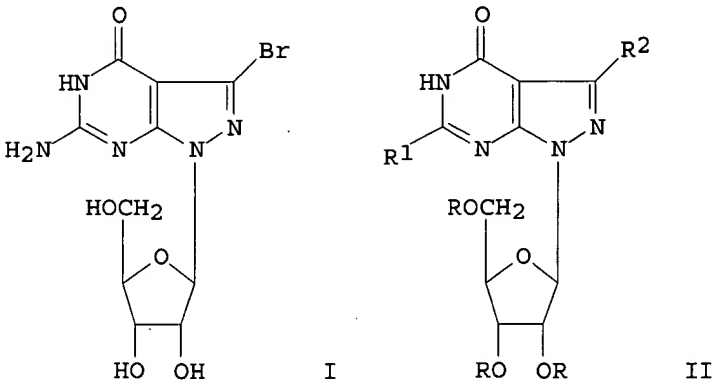
SOURCE: Journal of Medicinal Chemistry (1985), 28(8), 1010-16
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



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(FILE 'HOME' ENTERED AT 17:06:17 ON 21 AUG 2003)

L18 ANSWER 1 OF 1 CASREACT COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 103:37693 CASREACT
TITLE: Synthesis and biological activity of 6-azacadeguomycin and certain 3,4,6-trisubstituted pyrazolo[3,4-d]pyrimidine ribonucleosides
AUTHOR(S): Petrie, Charles R., III; Cottam, Howard B.; McKernan, Patricia A.; Robins, Roland K.; Revankar, Ganapathi R.
CORPORATE SOURCE: Cancer Res. Cent., Brigham Young Univ., Provo, UT, 84602, USA
SOURCE: Journal of Medicinal Chemistry (1985), 28(8), 1010-16
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
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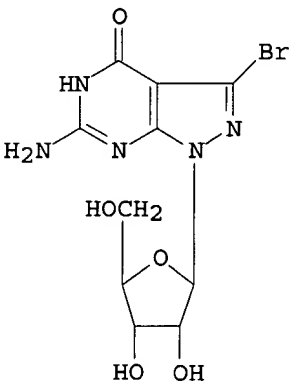

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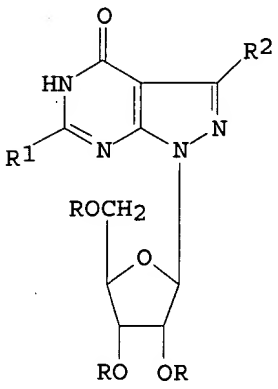

II

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L45 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1979:457368 CAPLUS
DOCUMENT NUMBER: 91:57368
TITLE: Analogs of **nucleosides**. XVII. Preparation of 2'deoxyribonucleosides and their 5-halogeno derivatives
AUTHOR(S): Brokes, Josef; Hrebabecky, Hubert; Beranek, Jiri
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Czech. Acad. Sci., Prague, 166 10/6, Czech.
SOURCE: Collection of Czechoslovak Chemical Communications (1979), 44(2), 439-47
CODEN: CCCCAK; ISSN: 0366-547X
DOCUMENT TYPE: Journal
LANGUAGE: English
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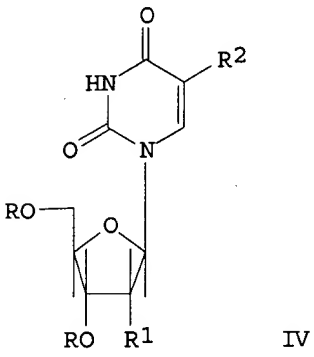
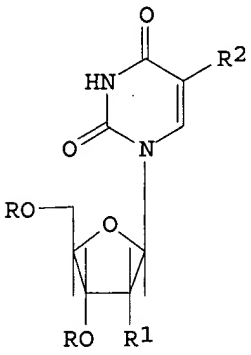


IV

AB 2'-Deoxyuridine and its 5-halo derivs. were prepd. from uridine (I) or O2, 2'-cyclouridine (II) by reaction with acetyl **halides** and selective dehalogenation with Bu2SnH (III). I and AcBr gave a mixt. of 7% IV (R = Ac, R1 = OAc, R2 = H) and 73% IV (R = Ac, R1 = Br, R2 = H) which was **reduced** by III and Me2C(CN)N:NC(CN)Me2 (V) to give 71% IV (R = Ac, R1 = R2 = H)(VI). Similarly, 5-fluorouridine yielded IV (R = Ac, R1 = OAc, R2 = F) and IV (R = Ac, R1 = H, R2 = F), which was deprotected by NH3-MeOH to give IV (R = R1 = H, R2 = F). II was treated with AcCl and then with III-V to give 88.5% IV (R = R1 = R2 = H) (VII) after deblocking. Treatment of VI and VII with bromosuccinimide gave 78% IV (R = Ac, R1 = H, R2 = Br) and 43% IV (R = R1 = H, R2 = Br):. Nucleophilic cleavage of II.HCl and cycloazauridine hydrochloride by methanolic HCl was also studied.

L45 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1979:457368 CAPLUS
DOCUMENT NUMBER: 91:57368
TITLE: Analogs of **nucleosides**. XVII. Preparation of 2'deoxyribonucleosides and their 5-halogeno derivatives
AUTHOR(S): Brokes, Josef; Hrebabecky, Hubert; Beranek, Jiri
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Czech. Acad. Sci., Prague, 166 10/6, Czech.
SOURCE: Collection of Czechoslovak Chemical Communications (1979), 44(2), 439-47
CODEN: CCCCAK; ISSN: 0366-547X
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



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L23 ANSWER 3 OF 5 CA COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 138:221790 CA
TITLE: Process for the synthesis of pyrazolopyrimidine **nucleosides** via halogenation reaction and using photolabile hydroxy protecting groups
INVENTOR(S): Dempcy, Robert O.; Adams, A. David; Reed, Michael W.
PATENT ASSIGNEE(S): Epoch Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022859	A2	20030320	WO 2002-US28476	20020905
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN; YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003078413	A1	20030424	US 2001-954624	20010912

PRIORITY APPLN. INFO.: US 2001-954624 A 20010912
OTHER SOURCE(S): CASREACT 138:221790; MARPAT 138:221790
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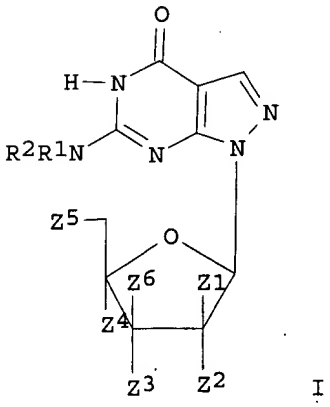

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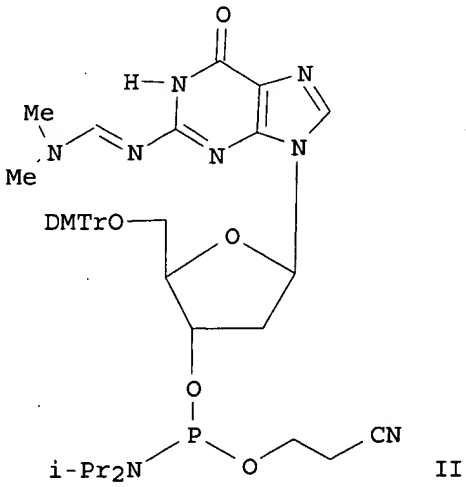


II

AB The present invention provides a **nucleosides** comprising a pyrazolopyrimidine base I and a process for producing the same. In particular, the processes of the present invention comprises using a halogenated pyrazolopyrimidine base and removing the **halogen** after the base is coupled to a sugar moiety. The presence of the **halogen** on the **nucleoside** base allows facile and economical prodn. of a large quantity of **nucleosides**. Thus, II

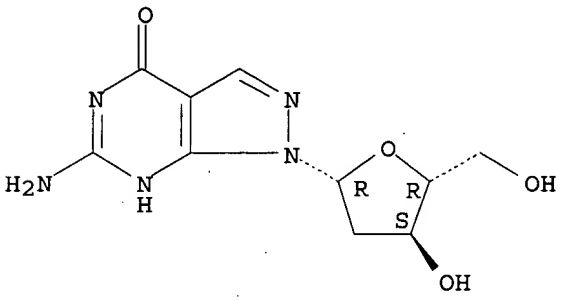
was prepd. via halogenation reaction and using photolabile hydroxy protecting groups.

IT **100644-70-0P**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for synthesis of pyrazolopyrimidine **nucleosides** via halogenation reaction and using photolabile hydroxy protecting groups)

RN 100644-70-0 CA

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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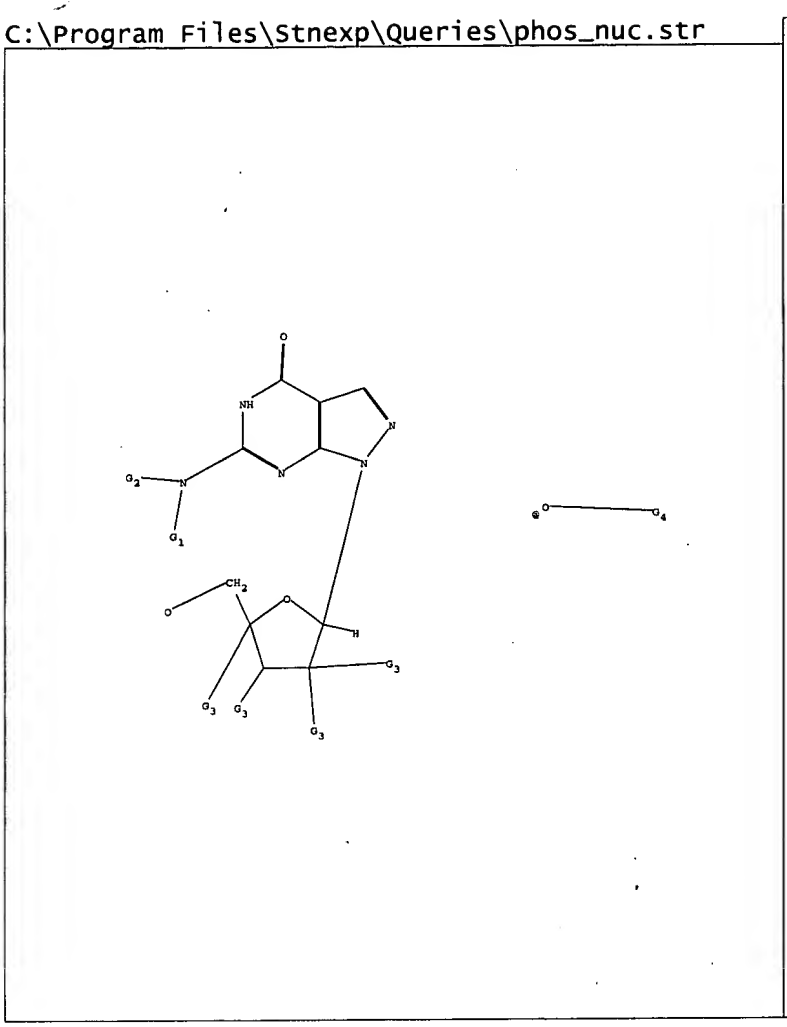
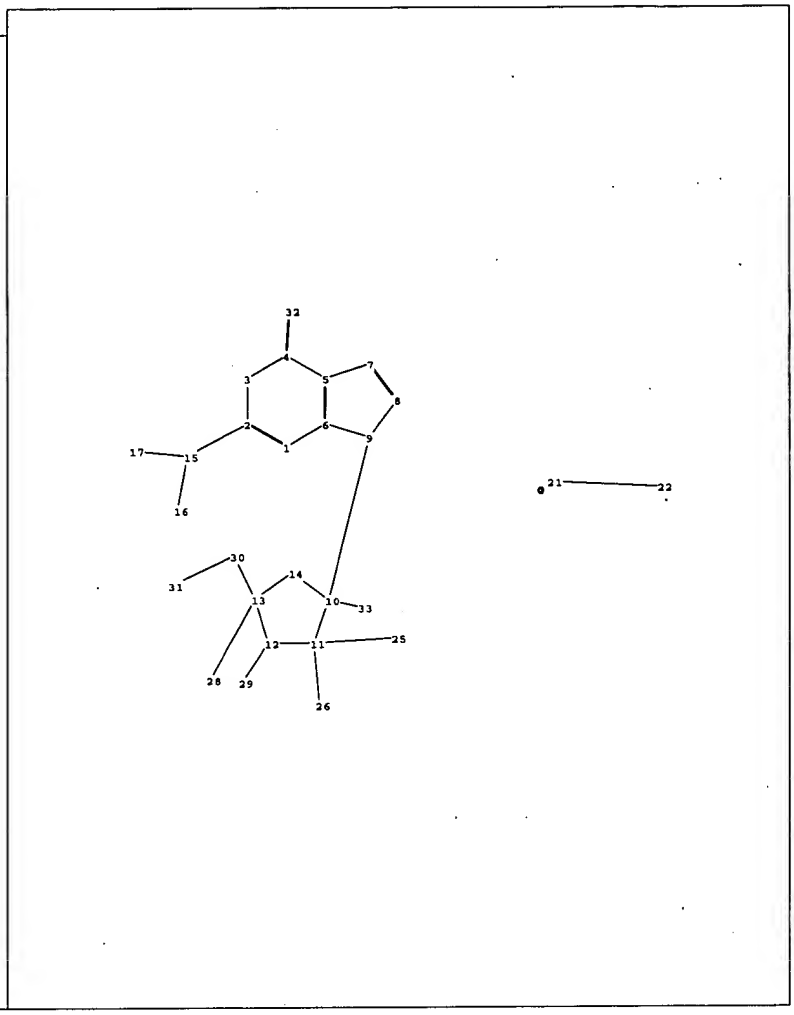




chain nodes :
15 16 17 21 22 25 26 28 29 30 31 32 33
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
2-15 4-32 9-10 10-33 11-25 11-26 12-29 13-28 13-30 15-16 15-17 21-22 30-31
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 10-11 10-14 11-12 12-13 13-14
exact/norm bonds :
1-2 1-6 2-3 2-15 3-4 4-5 4-32 5-6 5-7 6-9 7-8 8-9 9-10 10-11 10-14 11-12
11-25 11-26 12-13 12-29 13-14 13-28 15-16 15-17 21-22
exact bonds :
10-33 13-30 30-31

G1:H,Ak

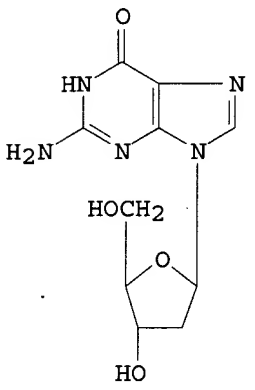
G2:H,Ak,N

G3:H,X,Ak

G4:H,Ak,O

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 21:CLASS 22:CLASS 25:CLASS
26:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:CLASS

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:75966 CAPLUS
DOCUMENT NUMBER: 110:75966
TITLE: 8-Aza-7-deaza-2'-deoxyguanosine: **phosphoramidite** synthesis and properties of octanucleotides
AUTHOR(S): Seela, Frank; Driller, Hansjuergen
CORPORATE SOURCE: Lab. Org. Bioorgan. Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.
SOURCE: Helvetica Chimica Acta (1988), 71(5), 1191-8
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:75966
GI



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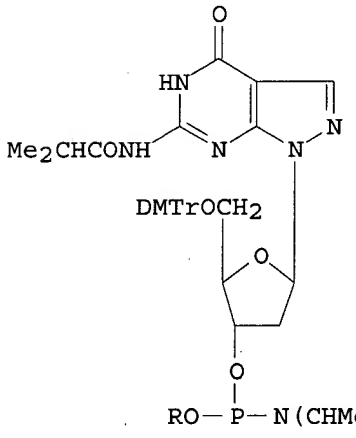
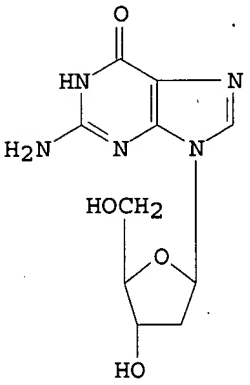


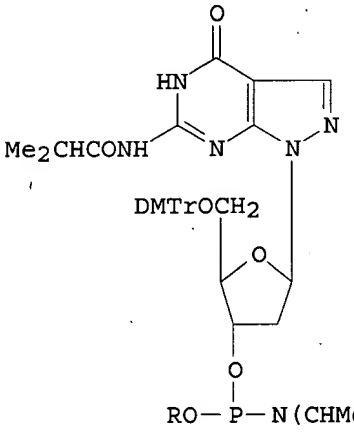
III

AB Base-modified octanucleotides derived from d(G1-G2-A-A-T-T-C-C) (I) but contg. 8-aza-7-deaza-2'-deoxyguanosine (II) instead of 2'-deoxyguanosine have been prepd. by solid-phase synthesis employing P(III) chem. Isobutyrylation of II, followed by 4,4'-dimethoxytritylation and subsequent phosphitylation yielded the Me or the cyanoethyl **phosphoramidites** III [R = Me, (CH2)2CN], resp. They were used as building blocks in automated DNA synthesis. The resulting octanucleotides contg. II showed increased Tm values compared to the parent oligomer I. The oligomers prepd. were employed as sequence-specific probes in endodeoxyribonuclease Eco RI oligonucleotide recognition. Whereas displacement of dG-2 (enzymic cleavage site of I) abolished phosphodiester hydrolysis, replacement of dG-1 enhanced the cleavage rate compared to I.

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:75966 CAPLUS
DOCUMENT NUMBER: 110:75966
TITLE: 8-Aza-7-deaza-2'-deoxyguanosine: **phosphoramidite** synthesis and properties of octanucleotides
AUTHOR(S): Seela, Frank; Driller, Hansjuergen
CORPORATE SOURCE: Lab. Org. Bioorgan. Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.
SOURCE: Helvetica Chimica Acta (1988), 71(5), 1191-8
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:75966
GI



II

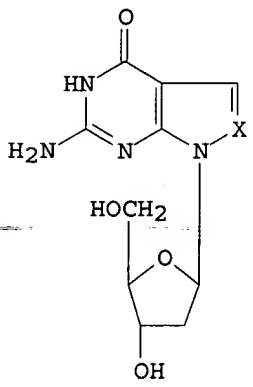


III

AB Base-modified octanucleotides derived from d(G1-G2-A-A-T-T-C-C) (I) but contg. 8-aza-7-deaza-2'-deoxyguanosine (II) instead of 2'-deoxyguanosine have been prepd. by solid-phase synthesis employing P(III) chem. Isobutyrylation of II, followed by 4,4'-dimethoxytritylation and subsequent phosphitylation yielded the Me or the cyanoethyl **phosphoramidites** III [R = Me, (CH2)2CN], resp. They were used as building blocks in automated DNA synthesis. The resulting octanucleotides contg. II showed increased Tm values compared to the parent oligomer I. The oligomers prepd. were employed as sequence-specific probes in endodeoxyribonuclease Eco RI oligonucleotide recognition. Whereas displacement of dG-2 (enzymic cleavage site of I) abolished phosphodiester hydrolysis, replacement of dG-1 enhanced the cleavage rate compared to I.

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:693428 CAPLUS
DOCUMENT NUMBER: 132:64475
TITLE: Oligonucleotides containing pyrazolo[3,4-d]pyrimidines: the influence of 7-substituted 8-aza-7-deaza-2'-deoxyguanosines on the duplex structure and stability
AUTHOR(S): Seela, Frank; Becher, Georg
CORPORATE SOURCE: Laboratorium fur Organische und Bioorganische Chemie, Institut fur Chemie, Universitat Osnabruck, Osnabruck, D-49069, Germany
SOURCE: Helvetica Chimica Acta (1999), 82(10), 1640-1655
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Oligonucleotides contg. 7-substituted 8-aza-7-deazaguanines (= 6-amino-1,5-dihydro-4H-pyrazolo[3,4-d]pyrimidin-4-ones) were prepd. by automated solid-phase synthesis. A series of 7-alkynylated 8-aza-7-deaza-2'-deoxyguanosines were synthesized with the 7-iodonucleoside as starting material and by the Pd0/Cu1-catalyzed cross-coupling reaction with various alkynes. **Phosphoramidites** were prepd. from the 7-substituted 8-aza-7-deaza-2'-deoxyguanosine derivs. carrying halogeno, cyano, and hexynyl substituents. From the melting profiles of oligonucleotide duplexes, the Tm values as well as the thermodn. data were detd. A significant duplex stabilization by the 7-substituents was obsd. for the DNA .cntdot. DNA duplexes, but not in the case of DNA .cntdot. RNA hybrids.
REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:458263 CAPLUS
DOCUMENT NUMBER: 111:58263
TITLE: Alternating d(G-C)3 and d(C-G)3 hexanucleotides containing 7-deaza-2'-deoxyguanosine or 8-aza-7-deaza-2'-deoxyguanosine in place of dG
AUTHOR(S): Seela, Frank; Driller, Hansjuergen
CORPORATE SOURCE: Fachber. Biol./Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.
SOURCE: Nucleic Acids Research (1989), 17(3), 901-10
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

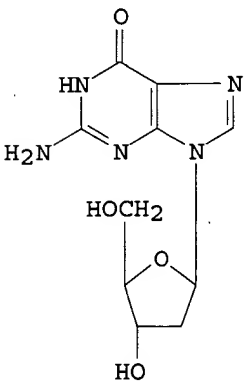


I

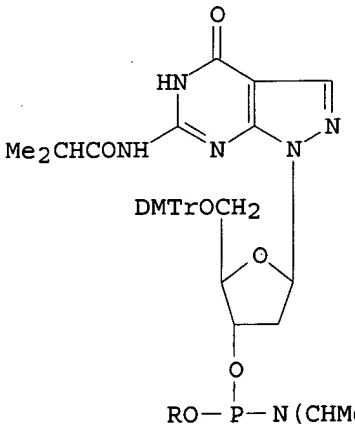
AB The synthesis of alternating hexamers derived from d(C-G)3 or d(G-C)3 but contg. c7z8Gd (I, X = N) or c7Gd (I, X = CH) instead of dG is described employing **phosphoramidite**-chem. Apart from the isobutyryl group, the dimethylaminomethylene residue was used for the nucleobase-protection of I (X = CH). The methyl- and the cyanoethyl-**phosphoramidites** of I (X = CH) were prepd. They were employed together with those of c7G or c7z8Gd in automated oligonucleotide synthesis. Tm-values as well as thermodn. data of the oligomers indicated that duplexes were destabilized if c7Gd replaced dG, whereas c7z8Gd stabilized the duplex structure. In contrast to d(C-G)3 which underwent salt-dependent B-Z transition, the CD spectra of oligomers contg. c7Gd or c7z8Gd in place of dG showed retained .beta.-conformation.

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1989:75966 CAPLUS
DOCUMENT NUMBER: 110:75966
TITLE: 8-Aza-7-deaza-2'-deoxyguanosine: **phosphoramidite** synthesis and properties of octanucleotides
AUTHOR(S): Seela, Frank; Driller, Hansjuergen
CORPORATE SOURCE: Lab. Org. Bioorgan. Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.
SOURCE: Helvetica Chimica Acta (1988), 71(5), 1191-8
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:75966
GI



II



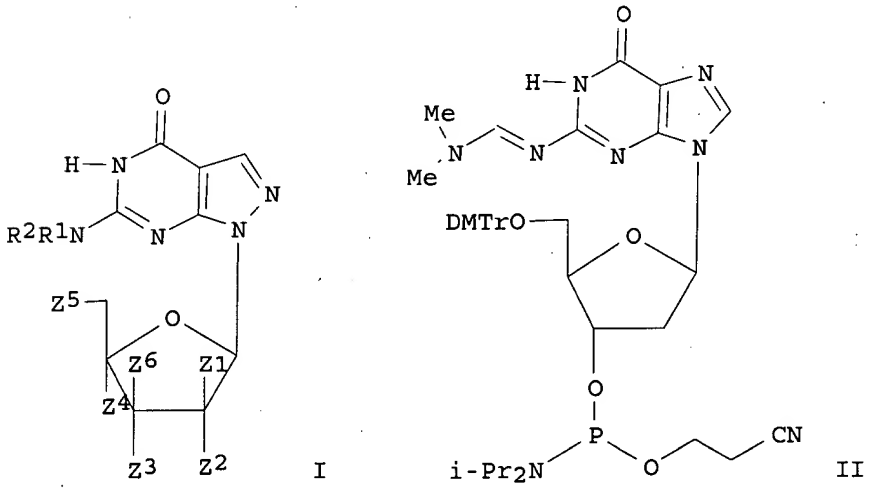
III

AB Base-modified octanucleotides derived from d(G1-G2-A-A-T-T-C-C) (I) but contg. 8-aza-7-deaza-2'-deoxyguanosine (II) instead of 2'-deoxyguanosine have been prepd. by solid-phase synthesis employing P(III) chem. Isobutyrylation of II, followed by 4,4'-dimethoxytritylation and subsequent phosphitylation yielded the Me or the cyanoethyl **phosphoramidites** III [R = Me, (CH2)2CN], resp. They were used as building blocks in automated DNA synthesis. The resulting octanucleotides contg. II showed increased Tm values compared to the parent oligomer I. The oligomers prepd. were employed as sequence-specific probes in endodeoxyribonuclease Eco RI oligonucleotide recognition. Whereas displacement of dG-2 (enzymic cleavage site of I) abolished phosphodiester hydrolysis, replacement of dG-1 enhanced the cleavage rate compared to I.

L10 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:221699 CAPLUS
DOCUMENT NUMBER: 138:221790
TITLE: Process for the synthesis of pyrazolopyrimidine **nucleosides** via halogenation reaction and using photolabile hydroxy protecting groups
INVENTOR(S): Dempcy, Robert O.; Adams, A. David; Reed, Michael W.
PATENT ASSIGNEE(S): Epoch Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022859	A2	20030320	WO 2002-US28476	20020905
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003078413	A1	20030424	US 2001-954624	20010912

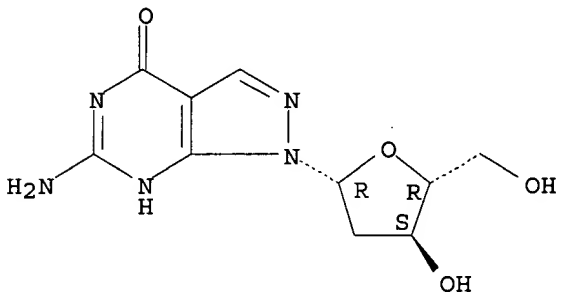
PRIORITY APPLN. INFO.: US 2001-954624 A 20010912
OTHER SOURCE(S): CASREACT 138:221790; MARPAT 138:221790
GI



AB The present invention provides a **nucleosides** comprising a pyrazolopyrimidine base I and a process for producing the same. In particular, the processes of the present invention comprises using a halogenated pyrazolopyrimidine base and removing the halogen after the base is coupled to a sugar moiety. The presence of the halogen on the **nucleoside** base allows facile and economical prodn. of a large quantity of **nucleosides**. Thus, II was prepd. via halogenation reaction and using photolabile hydroxy protecting groups.

IT **100644-70-0P**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for synthesis of pyrazolopyrimidine **nucleosides** via halogenation reaction and using photolabile hydroxy protecting groups)
RN 100644-70-0 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

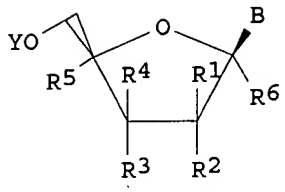
Absolute stereochemistry.



L10 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:555629 CAPLUS
DOCUMENT NUMBER: 137:125359
TITLE: Preparation of **nucleoside** derivatives as inhibitors of RNA-dependent RNA viral polymerase
INVENTOR(S): Carroll, Steven S.; Lafemina, Robert L.; Hall, Dawn L.; Himmelberger, Amy L.; Kuo, Lawrence C.; Maccoss, Malcolm; Olsen, David B.; Rutkowski, Carrie A.; Tomassini, Joanne E.; An, Haoyun; Bhat, Balkrishen; Bhat, Neelima; Cook, Phillip Dan; Eldrup, Anne B.; Guinosso, Charles J.; Prhavc, Marija; Prakash, Thazha P.
PATENT ASSIGNEE(S): Merck & Co., Inc., USA; Isis Pharmaceuticals, Inc.
SOURCE: PCT Int. Appl., 235 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002057425	A2	20020725	WO 2002-US1531	20020118
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002147160	A1	20021010	US 2002-52318	20020118

PRIORITY APPLN. INFO.: US 2001-263313P P 20010122
US 2001-282069P P 20010406
US 2001-299320P P 20010619
US 2001-344528P P 20011025
OTHER SOURCE(S): MARPAT 137:125359
GI



I

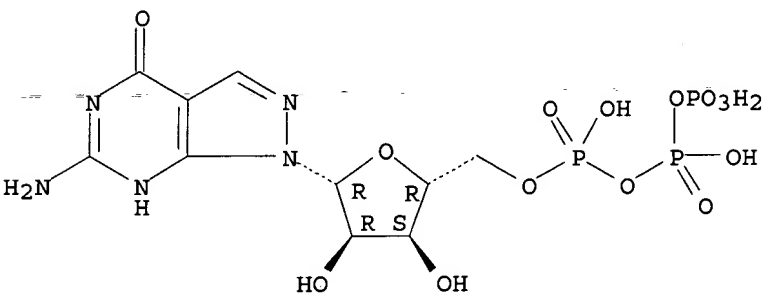
AB The present invention provides the prepn. of **nucleoside** compds. I, wherein B is nucleobase, Y is H, alkylcarbonyl, **phosphate**; R1 is H, alkenyl, alkynyl, alkyl; R2 and R3 are independently H, OH, halogen, alkyl, alkoxy, alkenyloxy, alkylthio, alkylcarbonyloxy, aryloxycrbonyl, azido, amino, alkylamino; R1 and R2 together with the carbon atom to which they are attached form a 3- to 6-membered heterocycle; R4 is H, OH, SH, NH2, alkylamino, cycloalkylamino, halogen, alkyl, alkoxy, CF3; R5 and R6 are independently H, hydroxymethyl, Me, fluoromethyl; and certain derivs. thereof which are inhibitors of RNA-dependent RNA viral polymerase. These compds. are inhibitors of RNA-dependent RNA viral replication and are useful for the treatment of RNA-dependent RNA viral infection. They are particularly useful as inhibitors of hepatitis C virus (HCV) NS5B polymerase, as inhibitors of HCV replication, and/or for the treatment of hepatitis C infection. The invention also describes pharmaceutical compns. contg. such **nucleoside** compds. alone or in combination with other agents active against RNA-dependent RNA viral infection, in particular HCV infection. Also disclosed are methods of inhibiting RNA-dependent RNA polymerase, inhibiting RNA-dependent RNA viral replication, and/or treating RNA-dependent RNA viral infection with the **nucleoside** compds. of the present invention. Thus, 4-amino-1-(2-C-methyl-.beta.-D-ribofuranosyl)-1H-pyrazolo[3,4-d]pyrimidine was prepd. as inhibitors of RNA-dependent RNA viral polymerase. Representative compds. tested in the HCV NS5B polymerase assay exhibited IC's less than 100 :mu.M. The compds. of the present invention were also evaluated for their ability to affect the replication of Hepatitis C Virus RNA in cultured hepatoma (HuH-7) cells contg. a sub-genomic HCV Replicon.

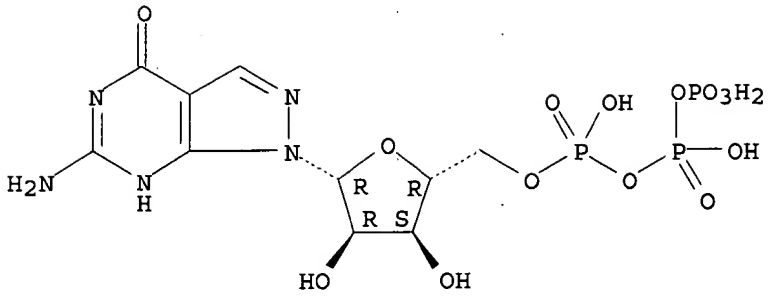
IT **28072-49-3P**
RL: IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **nucleoside** derivs. as inhibitors of RNA-dependent human RNA viral polymerase)

RN 28072-49-3 CAPLUS

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1,5-dihydro-1-[5-O-[hydroxy[[hydroxy(phosphonooxy)phosphinyl]oxy]phosphinyl]-.beta.-D-ribofuranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.





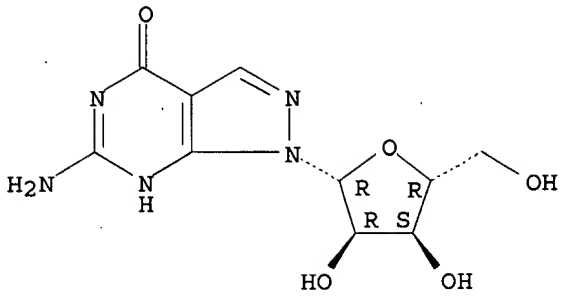
L10 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:604404 CAPLUS
DOCUMENT NUMBER: 117:204404
TITLE: A novel non-radioactive method for detection of **nucleoside** analog **phosphorylation** by 5'-nucleotidase
AUTHOR(S): Fujitaki, James M.; Nord, L. Dee; Willis, Randall C.; Robins, Roland K.
CORPORATE SOURCE: Nucl. Acid Res. Inst., ICN, Costa Mesa, CA, USA
SOURCE: Journal of Biochemical and Biophysical Methods (1992), 25(1), 1-10
CODEN: JBBMDG; ISSN: 0165-022X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Cytosolic 5'-nucleotidase has been implicated in the **phosphorylation** of certain **nucleosides** of therapeutic interest. In vitro, IMP and GMP serve as the optimal **phosphate** donors for this **nucleoside phosphotransferase** reaction. Existing assays for **nucleoside phosphorylation** by 5'-nucleotidase require a radiolabeled **nucleoside** as the **phosphate** acceptor and sepn. of the substrate-**nucleoside** from product-nucleotide is accomplished by filter binding or HPLC. The detection of **phosphorylation** of unlabeled **nucleoside** by HPLC is difficult since the UV absorbance of the **phosphate** donor, IMP, frequently obscures the absorbance of newly formed nucleotide. The use of ribavirin 5'-**phosphate** as the **phosphate** donor obviates this difficulty since this triazole heterocycle does not absorb at the wavelengths used to detect most **nucleoside** analogs. Using this procedure, the 5'-nucleotidase activity from the 100,000g supernatant fraction of human T-lymphoblasts deficient in adenosine kinase, hypoxanthine-guanine **phosphoribosyltransferase**, and deoxycytidine kinase was characterized with regard to structure-activity relationships for certain inosine and guanosine analogs.

IT **85426-74-0**, 7-Deaza-8-azaguanosine **96555-37-2**, 7-Deaza-7-bromo-8-azaguanosine
RL: ANST (Analytical study)
(**phosphorylation** of, nucleotidase assay for, structure in relation to)

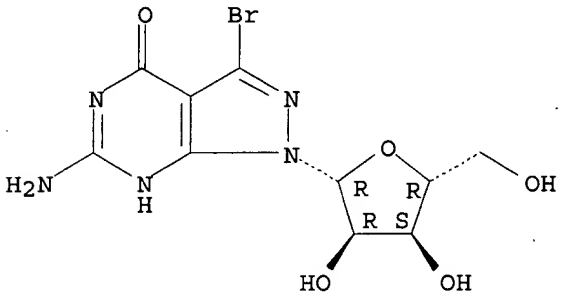
RN 85426-74-0 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1,5-dihydro-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

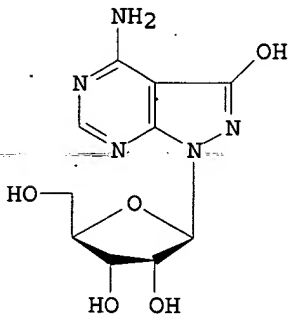


RN 96555-37-2 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-3-bromo-1,5-dihydro-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

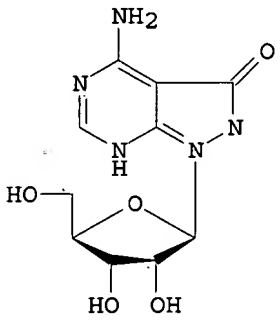
Absolute stereochemistry.



L10 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:497956 CAPLUS
DOCUMENT NUMBER: 113:97956
TITLE: Synthesis of certain pyrazolo[3,4-d]pyrimidin-3-one **nucleosides**
AUTHOR(S): Anderson, Jack D.; Cottam, Howard B.; Larson, Steven B.; Nord, L. Dee; Revankar, Ganapathi R.; Robins, Roland K.
CORPORATE SOURCE: ICN Nucl. Acid Res. Inst., Costa Mesa, CA, 92626, USA
SOURCE: Journal of Heterocyclic Chemistry (1990), 27(2), 439-53
CODEN: JHTCAD; ISSN: 0022-152X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:97956
GI



I



II

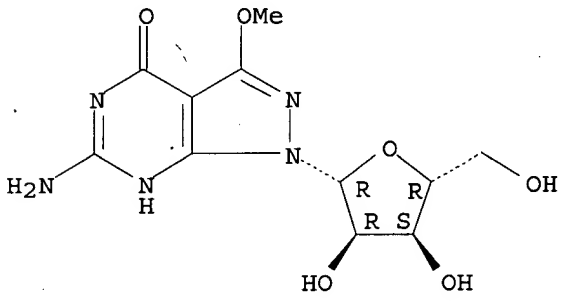
AB Synthesis of the pyrazolo[3,4-d]pyrimidin-3-one congeners of guanosine, adenosine and inosine is described. Glycosylation of 3-methoxy-6-methylthio-1H-pyrazolo[3,4-d]pyrimidin-4(5H)-one with 1-O-acetyl-2,3,5-tri-O-benzoyl-D-ribofuranose in the presence of boron trifluoride etherate gave 3-methoxy-6-methylthio-1-(2,3,5-tri-O-benzoyl-.beta.-D-ribofuranosyl)pyrazolo[3,4-d]pyrimidin-4(5H)-one which, after successive treatments with 3-chloroperoxybenzoic acid and methanolic ammonia, afforded 6-amino-3-methoxy-1-.beta.-D-ribofuranosylpyrazolo[3,4-d]pyrimidin-4(5H)-one. The guanosine analog, 6-amino-1-.beta.-D-ribofuranosylpyrazolo[3,4-d]pyrimidine-3,4(2H,5H)-dione, was made by sodium iodide-chlorotrimethylsilane treatment of 6-amino-3-methoxy-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)pyrazolo[3,4-d]pyrimidin-4(5H)-one, followed by sugar deprotection. Treatment of the adenine analog, 4-amino-1H-pyrazolo[3,4-d]pyrimidin-3(2H)-one, according to the high temp. glycosylation procedure yielded a mixt. of N-1 and N-2 ribosyl-attached isomers. Deprotection of the individual isomers afforded 4-amino-3-hydroxyl-.beta.-D-ribofuranosylpyrazolo[3,4-d]pyrimidine (I) and 4-amino-2-.beta.-D-ribofuranosylpyrazolo[3,4-d]pyrimidin-3(7H)-one (II). The structures of I and II were established by single crystal X-ray diffraction anal. The inosine analog, 1-.beta.-D-ribofuranosylpyrazolo[3,4-d]pyrimidine-3,4(2H,5H)-dione, was synthesized enzymically by direct ribosylation of 1H-pyrazolo[3,4-d]pyrimidine-3,4(2H,5H)-dione with ribose-1-**phosphate** in the presence of purine **nucleoside phosphorylase**, and also deamination of I with adenosine deaminase.

IT **111375-45-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and acetylation of)

RN 111375-45-2 CAPLUS

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1,5-dihydro-3-methoxy-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

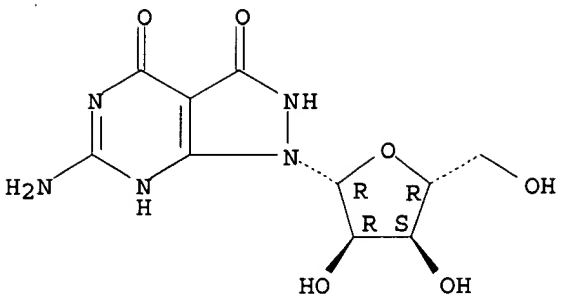


IT **127820-75-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and debenzoylation of)

RN 127820-75-1 CAPLUS

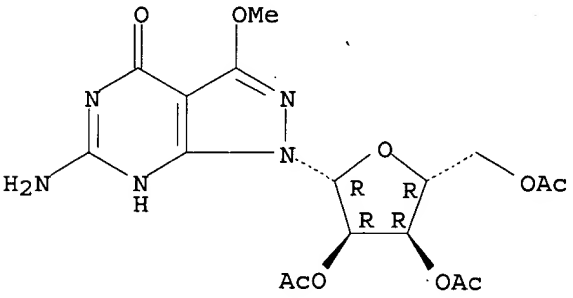
CN 1H-Pyrazolo[3,4-d]pyrimidine-3,4(2H,5H)-dione, 6-amino-1-.beta.-D-ribofuranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



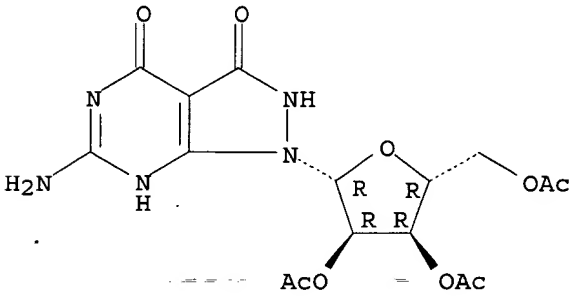
IT **128850-59-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and demethylation of)
RN 128850-59-9 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1,5-dihydro-3-methoxy-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **128850-60-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deprotection of)
RN 128850-60-2 CAPLUS
CN 1H-Pyrazolo[3,4-d]pyrimidine-3,4(2H,5H)-dione, 6-amino-1-(2,3,5-tri-O-acetyl-.beta.-D-ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L10 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:119293 CAPLUS
DOCUMENT NUMBER: 112:119293
TITLE: Pyrazolo[3,4-d]pyrimidine 2'-deoxyribo- and

2',3'-dideoxyribofuranosides: synthesis and application to oligonucleotide chemistry

AUTHOR(S): Seela, F.; Driller, H.; Kaiser, K.; Rosemeyer, H.; Steker, H.

CORPORATE SOURCE: Lab. Org. Bioorg. Chem., Univ. Osnabrueck, Fed. Rep. Ger.

SOURCE: Nucleosides & Nucleotides (1989), Volume Date 1988, 8(5-6), 789-92
CODEN: NUNUD5; ISSN: 0732-8311

DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:119293

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

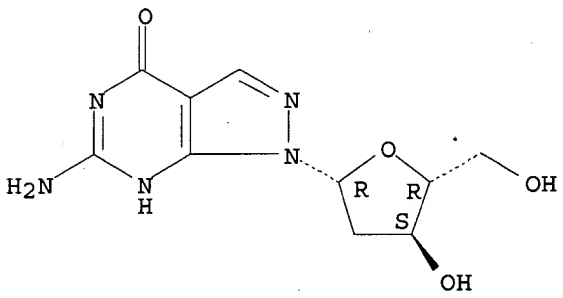
AB A symposium communication on the synthesis of pyrazolopyrimidine deoxyribonucleosides, e.g., I (R = NH2, H; R1 = H, NH2) and II (R2 = H, NH2), is described employing either liq.-liq. or solid-liq. phase-transfer glycosylation. From I (R = NH2, R1 = H) and II (R2= NH2), the **phosphoramidates** III (R3 = Me, CH2CH2CN, DMT = dimethoxytrityl) and IV were prepd. They were used in automated solid-phase synthesis of 10 oligonucleotides. Deoxygenation of I (R = NH2, R1 = H) and II (R2 = NH2) yielded pyrazolopyrimidine 2',3'-dideoxynucleosides isosteric to ddA, ddG, and ddI.

IT **100644-70-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deoxygenation or conversion of, to nucleotide derivs.)

RN 100644-70-0 CAPLUS

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

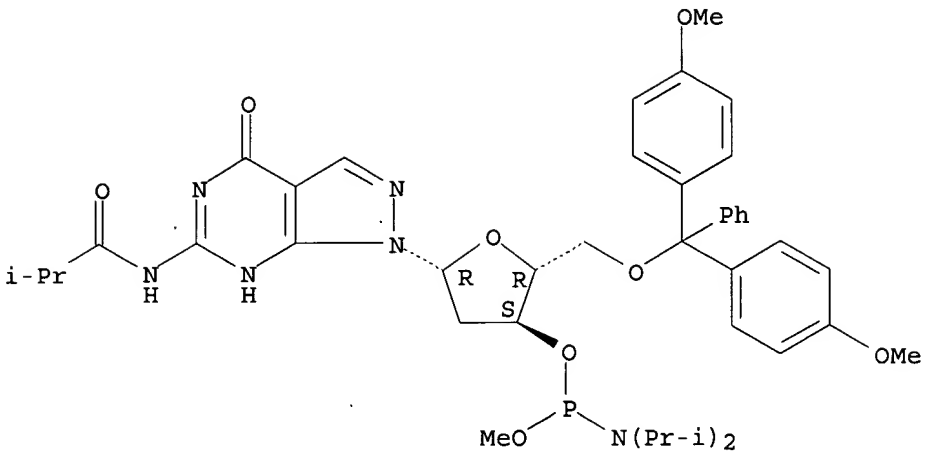


IT **118907-75-8P 118907-76-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for synthesis of oligonucleotides)

RN 118907-75-8 CAPLUS

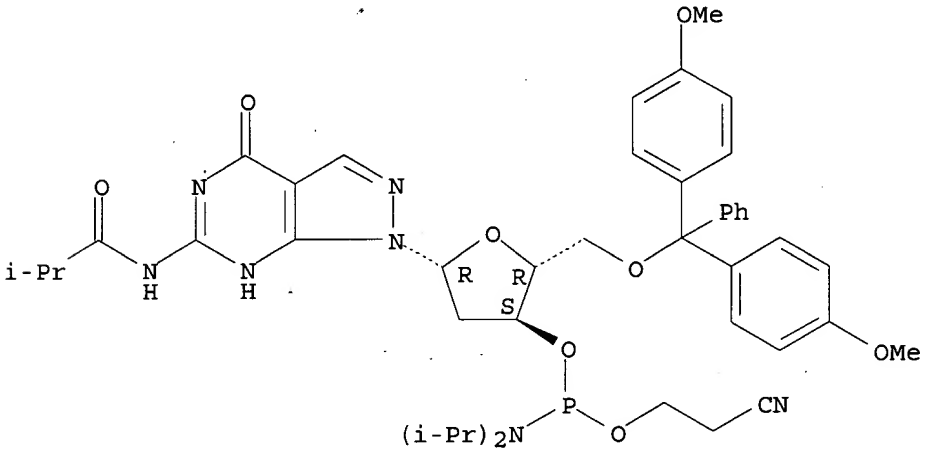
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 118907-76-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d his

(FILE 'HOME' ENTERED AT 14:45:51 ON 19 AUG 2003)

FILE 'REGISTRY' ENTERED AT 14:46:00 ON 19 AUG 2003
L1 STRUCTURE UPLOADED
L2 5 S L1 SSS SAM
L3 102 S L1 SSS FULL

FILE 'CAPLUS, MEDLINE' ENTERED AT 14:59:56 ON 19 AUG 2003
L4 47 S L3
L5 0 S L3 AND PHOSPHORAMIDITE NUCLEOSIDE
L6 3 S L3 AND PHOSPHORAMIDITE
L7 3 DUP REM L6 (0 DUPLICATES REMOVED)
L8 3 S L3 AND PHOSPHORAMIDITES
L9 30 S L3 AND NUCLEOSIDE
L10 5 S L9 AND PHOSP?

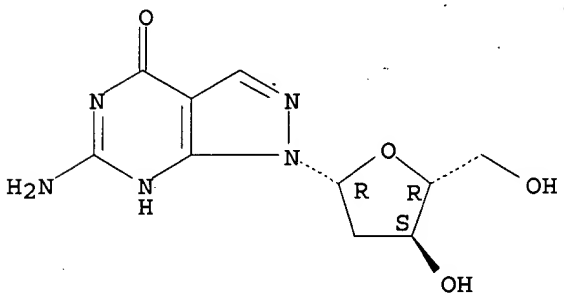
L21 ANSWER 1 OF 4 USPATFULL on STN
ACCESSION NUMBER: 2003:113672 USPATFULL
TITLE: Process for the synthesis of pyrazolopyrimidines
INVENTOR(S): Dempcy, Robert O., Kirkland, WA, UNITED STATES
Adams, A. David, Snohomish, WA, UNITED STATES
Reed, Michael W., Seattle, WA, UNITED STATES
PATENT ASSIGNEE(S): Epoch Biosciences, Inc., Bothell, WA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003078413	A1	20030424
APPLICATION INFO.:	US 2001-954624	A1	20010912 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 43
EXEMPLARY CLAIM: 1
LINE COUNT: 1015
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a nucleoside comprising a pyrazolopyrimidine base and a process for producing the same. In particular, the processes of the present invention comprises using a halogenated pyrazolopyrimidine base and removing the halogen after the base is coupled to a sugar moiety. The presence of the halogen on the nucleoside base allows facile and economical production of a large quantity of nucleosides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **100644-70-0P**
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)
RN 100644-70-0 USPATFULL
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

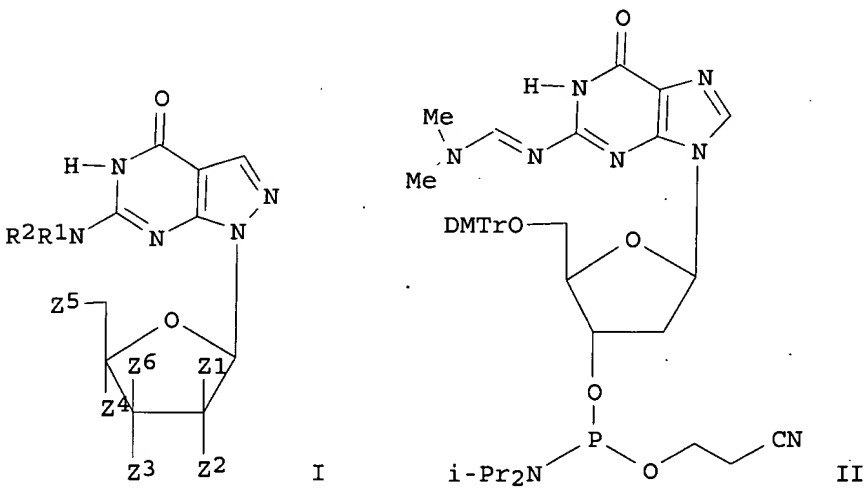
Absolute stereochemistry.



L23 ANSWER 3 OF 5 CA COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 138:221790 CA
TITLE: Process for the synthesis of pyrazolopyrimidine **nucleosides** via halogenation reaction and using photolabile hydroxy protecting groups
INVENTOR(S): Dempcy, Robert O.; Adams, A. David; Reed, Michael W.
PATENT ASSIGNEE(S): Epoch Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022859	A2	20030320	WO 2002-US28476	20020905
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003078413	A1	20030424	US 2001-954624	20010912

PRIORITY APPLN. INFO.: US 2001-954624 A 20010912
OTHER SOURCE(S): CASREACT 138:221790; MARPAT 138:221790
GI



AB The present invention provides a **nucleosides** comprising a pyrazolopyrimidine base I and a process for producing the same. In particular, the processes of the present invention comprises using a halogenated pyrazolopyrimidine base and removing the **halogen** after the base is coupled to a sugar moiety. The presence of the **halogen** on the **nucleoside** base allows facile and economical prodn. of a large quantity of **nucleosides**. Thus, II

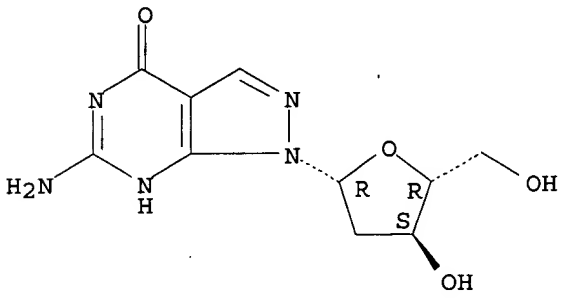
was prepd. via halogenation reaction and using photolabile hydroxy protecting groups.

IT **100644-70-0P**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for synthesis of pyrazolopyrimidine **nucleosides** via halogenation reaction and using photolabile hydroxy protecting groups)

RN 100644-70-0 CA

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

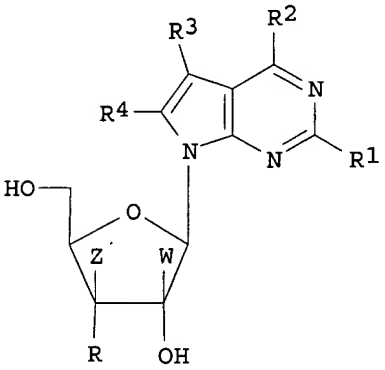


L23 ANSWER 2 OF 5 CA COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 139:53258 CA
TITLE: Solid phase synthesis and combinatorial libraries of deazapurine **nucleosides** useful in the treatment of viral infections and neoplastic diseases
INVENTOR(S): Girardet, Jean-Luc; An, Haoyun; Chamakura, Varaprasad; Gunic, Esmir; Hong, Zhi
PATENT ASSIGNEE(S): Ribapharm Inc., USA
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003051899	A1	20030626	WO 2002-US40416	20021217

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-342410P P 20011217
OTHER SOURCE(S): MARPAT 139:53258
GI



I

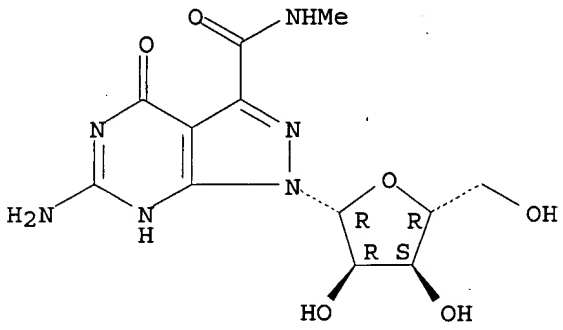
AB Deazapurine **nucleoside** analogs I, wherein R is H, OH; R1-R4 are independently H, **halogen**, NH2, NHR', R', CN, CONH2, N3, CH2CN; R' is substituted alkyl, unsubstituted alkyl, substituted aryl, and an unsubstituted aryl; W and Z are independently hydrogen, N3, NH2, OH, SH, R5, or NHR5 wherein R5 is an alkyl, substituted alkyl, alkenyl, a substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl; are prepd. in a combinatorial library approach. Particularly preferred compds. and libraries include various 7-deazapurines, 9-deazapurines, and 7-deaza-8-azaguanosine as heterocyclic bases, and it is generally preferred that such **nucleosides** include a ribofuranose as the sugar moiety. It is further contemplated that compds. generated using

contemplated libraries may be useful in the treatment of various conditions, particularly viral infections and neoplastic diseases (no data). Thus, I (R = OH; R1 = R4 = Z = W = H; R2 = NHBn; R3 = Ph) was prepd. useful in the treatment of viral infections and neoplastic diseases.

IT **547754-42-7P**
RL: CPN (Combinatorial preparation); CMBI (Combinatorial study); PREP (Preparation)
(solid phase synthesis and combinatorial libraries of deazapurine **nucleosides** useful in treatment of viral infections and neoplastic diseases)

RN 547754-42-7 CA
CN INDEX NAME NOT YET ASSIGNED

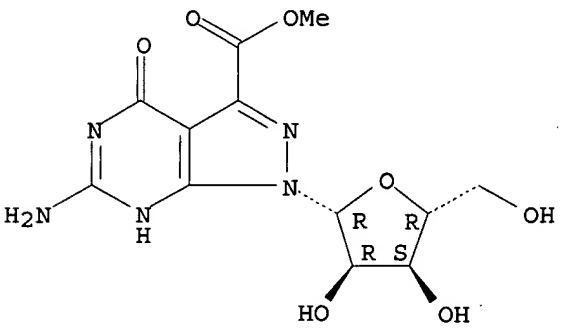
Absolute stereochemistry.



IT **547754-41-6DP**, 4-methoxytrityl resin support **547754-42-7DP**, 4-methoxytrityl resin support
RL: CPN (Combinatorial preparation); CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); PREP (Preparation); RACT (Reactant or reagent)
(solid phase synthesis and combinatorial libraries of deazapurine **nucleosides** useful in treatment of viral infections and neoplastic diseases)

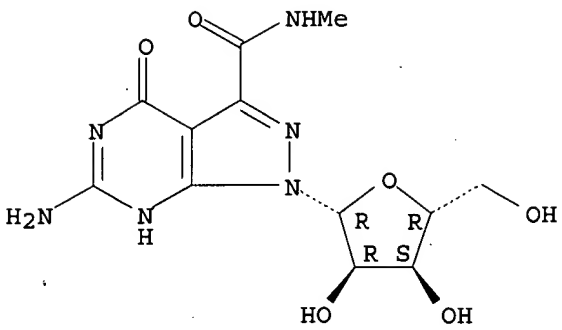
RN 547754-41-6 CA
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



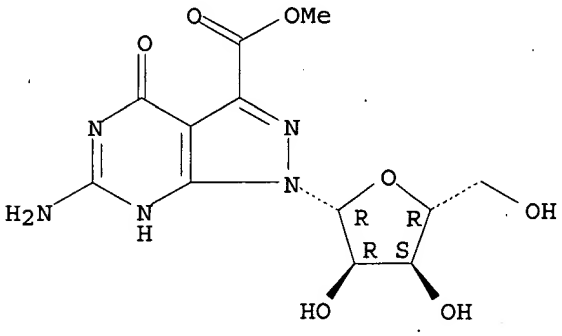
RN 547754-42-7 CA
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



IT **547754-41-6**
RL: CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); RACT (Reactant or reagent)
(solid phase synthesis and combinatorial libraries of deazapurine **nucleosides** useful in treatment of viral infections and neoplastic diseases)
RN 547754-41-6 CA
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:693428 CAPLUS
DOCUMENT NUMBER: 132:64475
TITLE: Oligonucleotides containing pyrazolo[3,4-d]pyrimidines: the influence of 7-substituted 8-aza-7-deaza-2'-deoxyguanosines on the duplex structure and stability
AUTHOR(S): Seela, Frank; Becher, Georg
CORPORATE SOURCE: Laboratorium fur Organische und Bioorganische Chemie, Institut fur Chemie, Universitat Osnabruck, Osnabruck, D-49069, Germany
SOURCE: Helvetica Chimica Acta (1999), 82(10), 1640-1655
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English

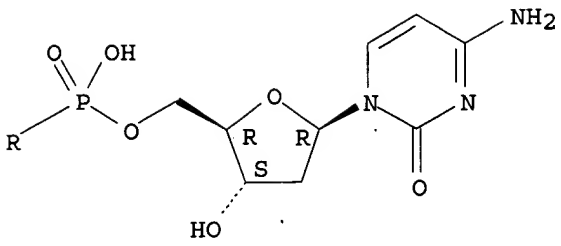
AB Oligonucleotides contg. 7-substituted 8-aza-7-deazaguanines (= 6-amino-1,5-dihydro-4H-pyrazolo[3,4-d]pyrimidin-4-ones) were prepd. by automated solid-phase synthesis. A series of 7-alkynylated 8-aza-7-deaza-2'-deoxyguanosines were synthesized with the 7-iodonucleoside as starting material and by the Pd0/Cu1-catalyzed cross-coupling reaction with various alkynes. **Phosphoramidites** were prepd. from the 7-substituted 8-aza-7-deaza-2'-deoxyguanosine derivs. carrying halogeno, cyano, and hexynyl substituents. From the melting profiles of oligonucleotide duplexes, the Tm values as well as the thermodn. data were detd. A significant duplex stabilization by the 7-substituents was obsd. for the DNA .cntdot. DNA duplexes, but not in the case of DNA .cntdot. RNA hybrids.

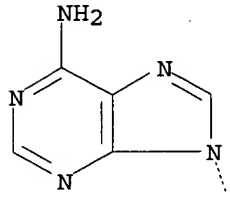
IT **118907-80-5DP**, self-complementary duplex **121742-44-7DP**, self-complementary duplex **215178-29-3DP**, self-complementary duplex **215178-31-7DP**, self-complementary duplex **215178-32-8DP**, self-complementary duplex **215178-35-1DP**, self-complementary duplex **215178-36-2DP**, self-complementary duplex **252761-75-4DP**, self-complementary duplex **252761-76-5DP**, self-complementary duplex **252761-77-6DP**, self-complementary duplex **252761-78-7DP**, self-complementary duplex
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of oligonucleotides contg. pyrazolo[3,4-d]pyrimidines and the influence of substituted deazadeoxyguanosines on the duplex structure and stability)

RN 118907-80-5 CAPLUS
CN Cytidine, 2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





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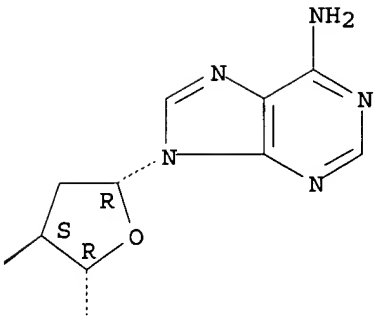
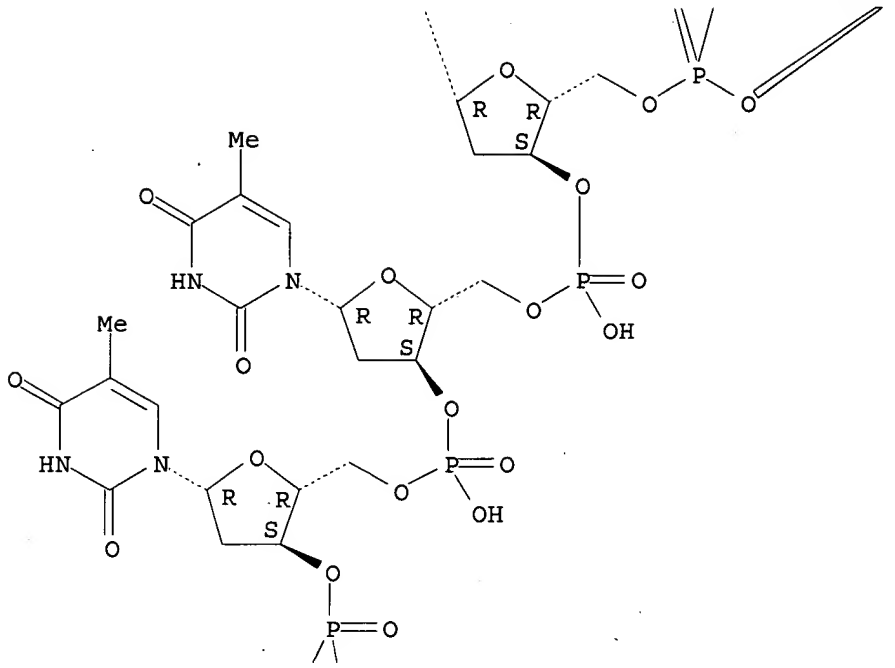
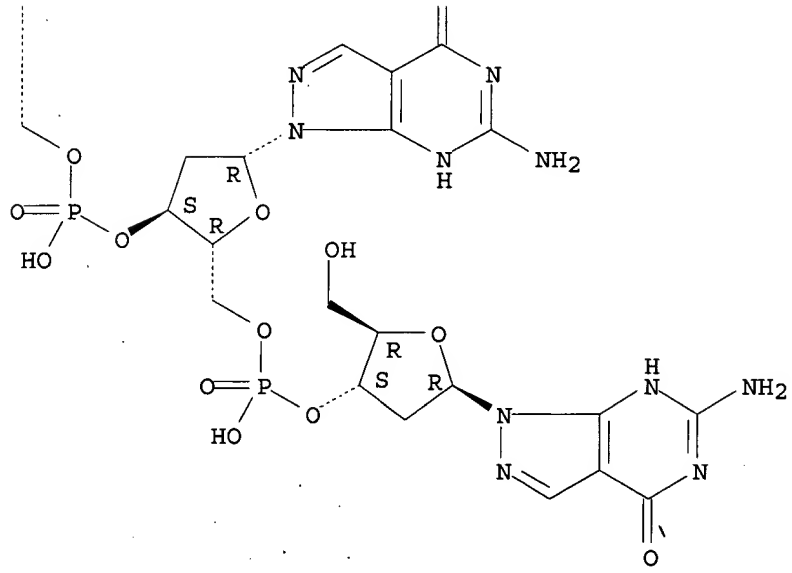


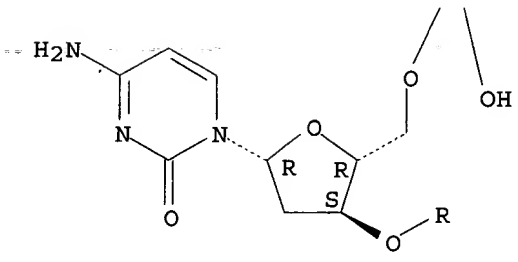
PAGE 2-A



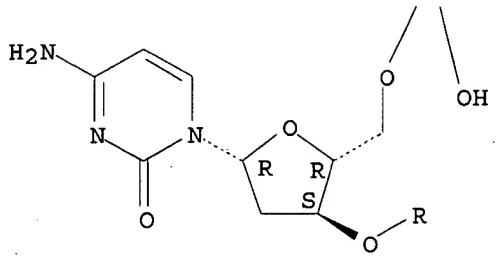
PAGE 2-B



PAGE 3-A



PAGE 3-A



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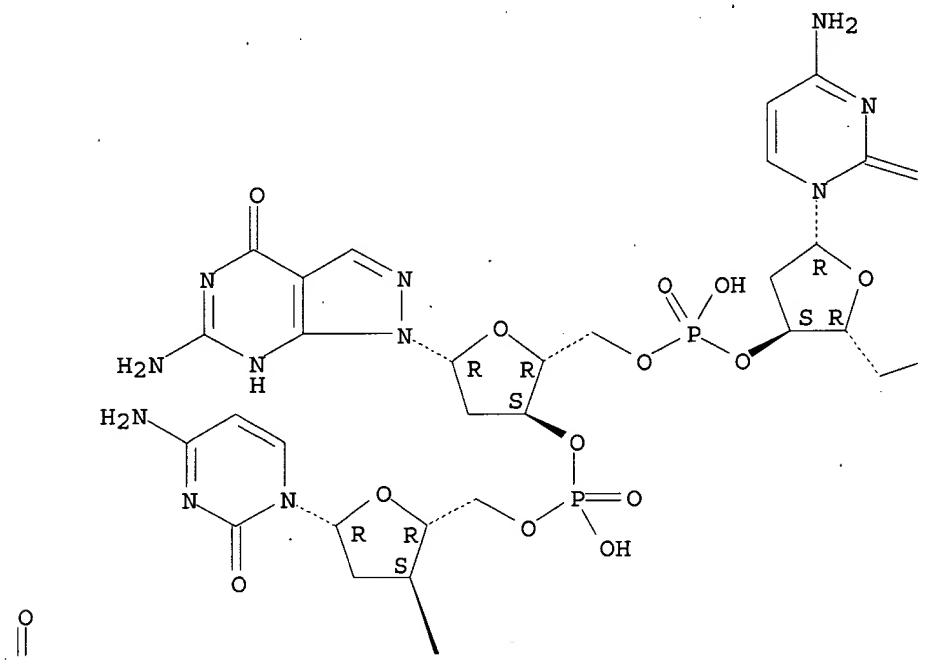
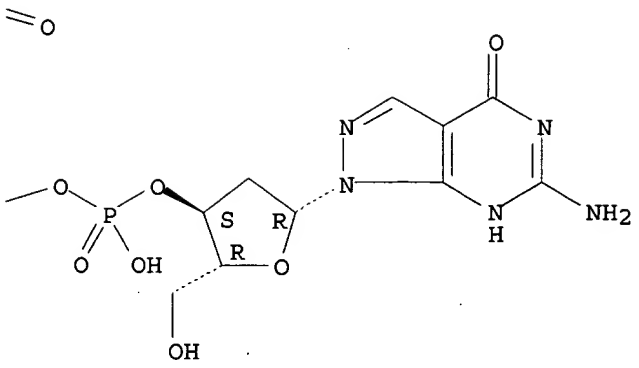
Absolute stereochemistry.

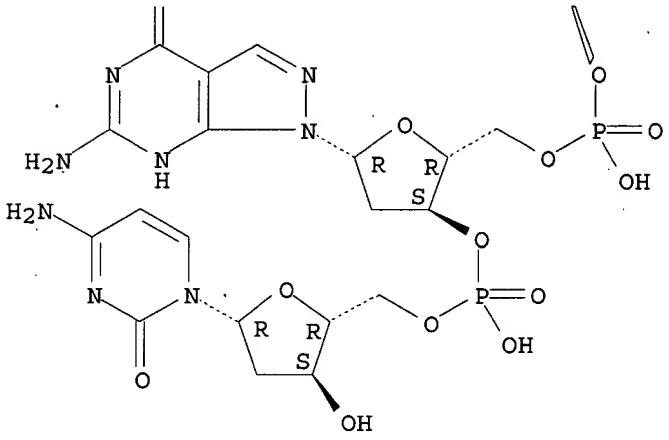
PAGE 1-A



PAGE 1-B



PAGE 2-A



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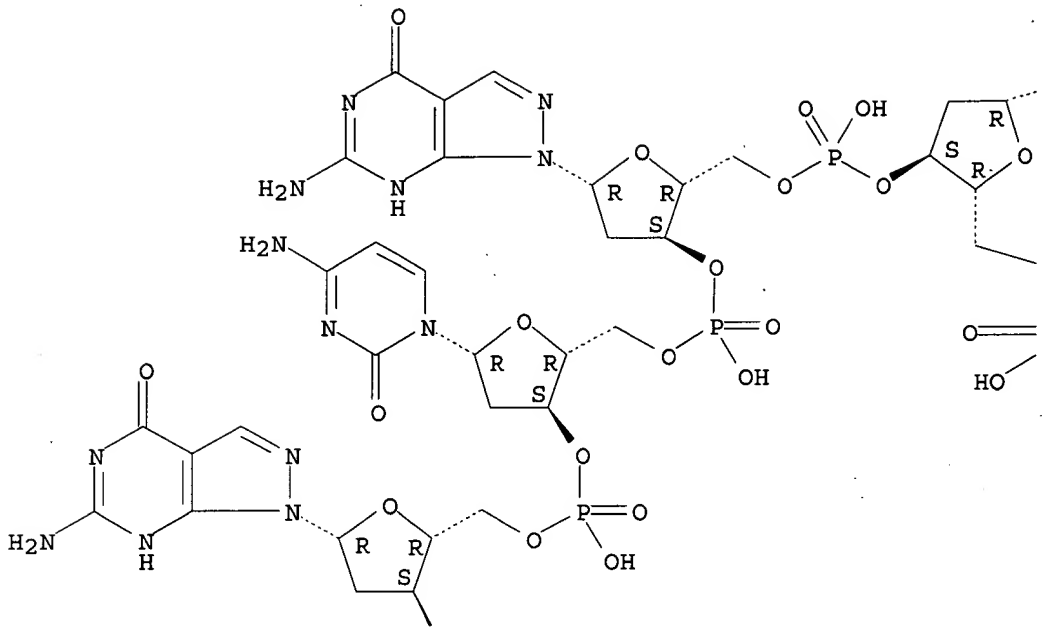
Absolute stereochemistry.

PAGE 1-A



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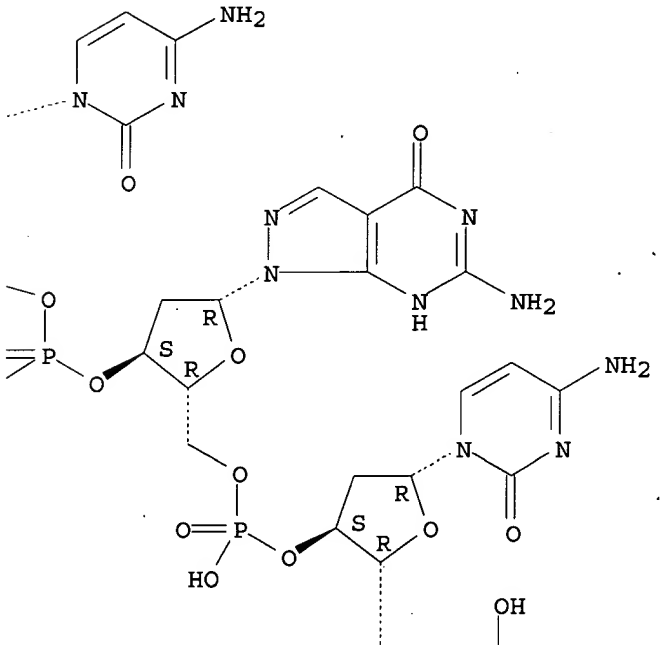
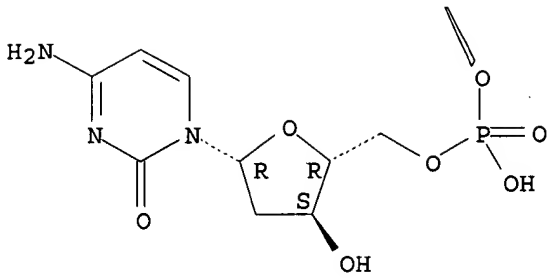
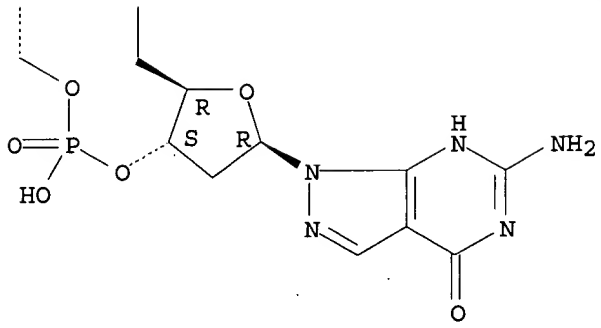


PAGE 2-A



PAGE 2-B



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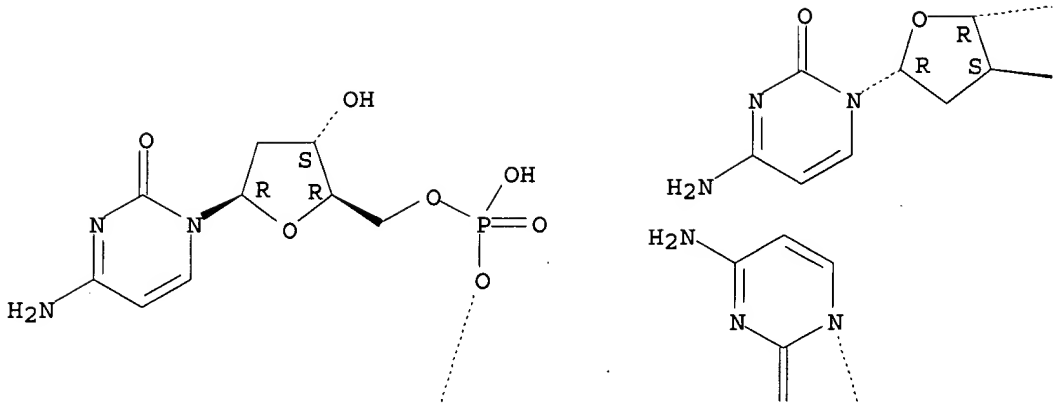
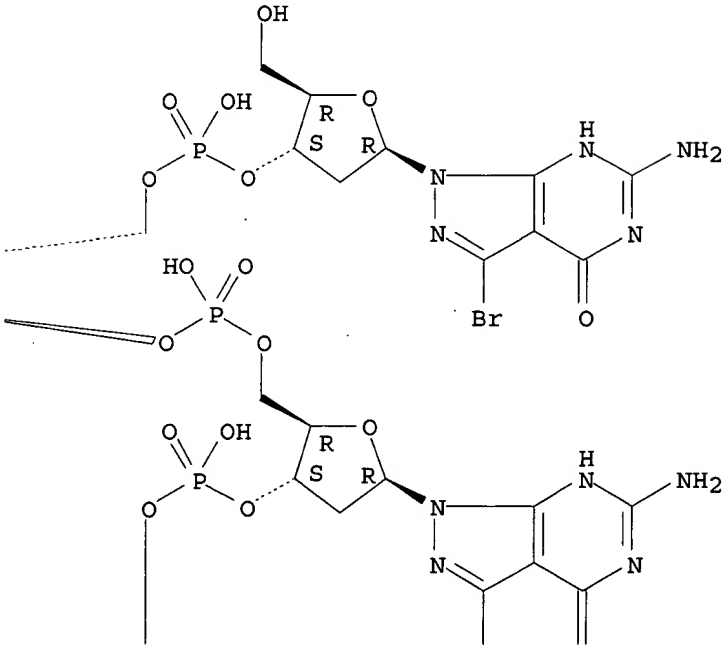
Absolute stereochemistry.

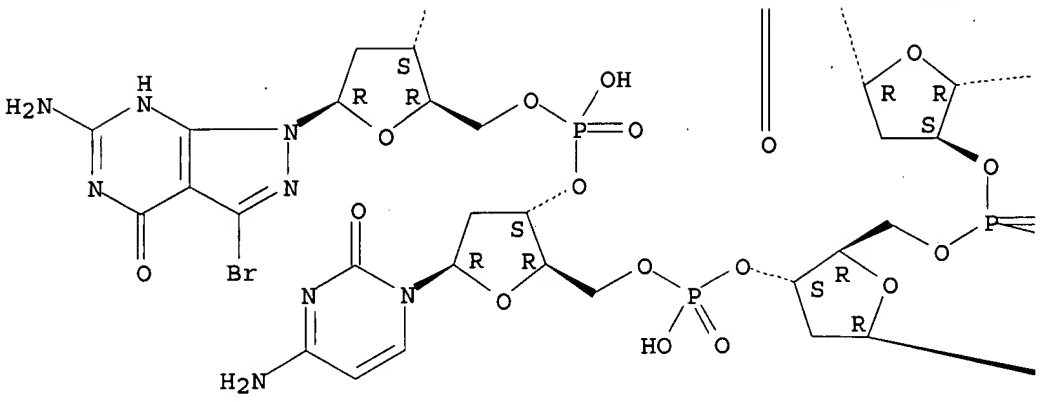
PAGE 1-A



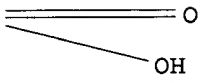
PAGE 1-B

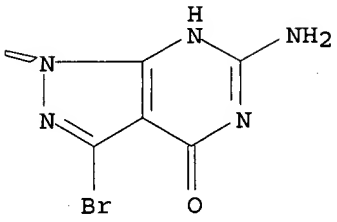


PAGE 2-A



PAGE 2-B





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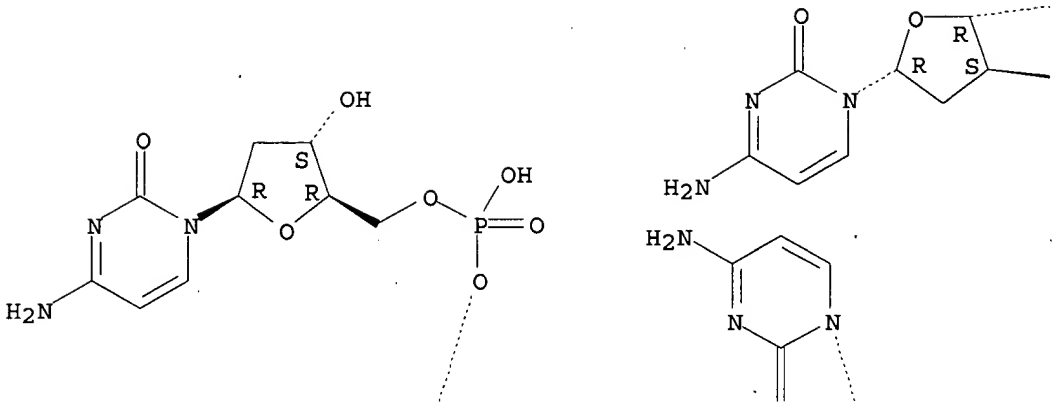
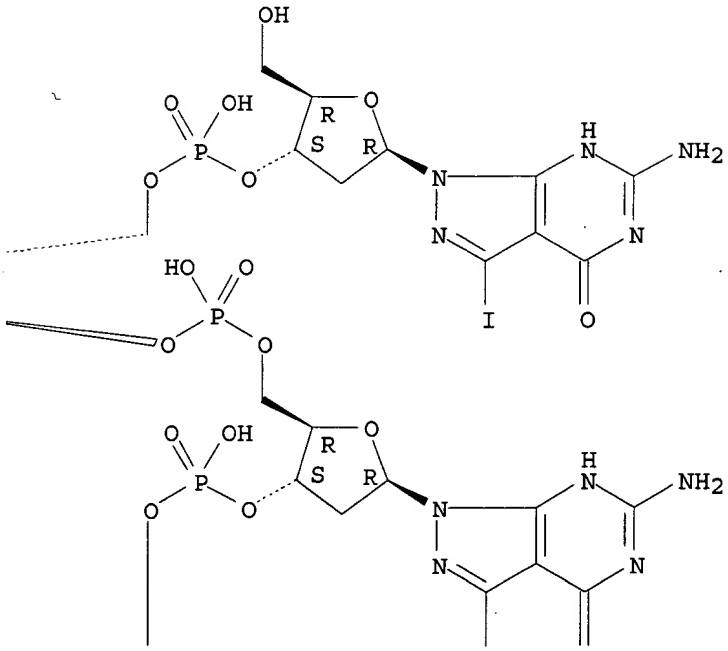
Absolute stereochemistry.

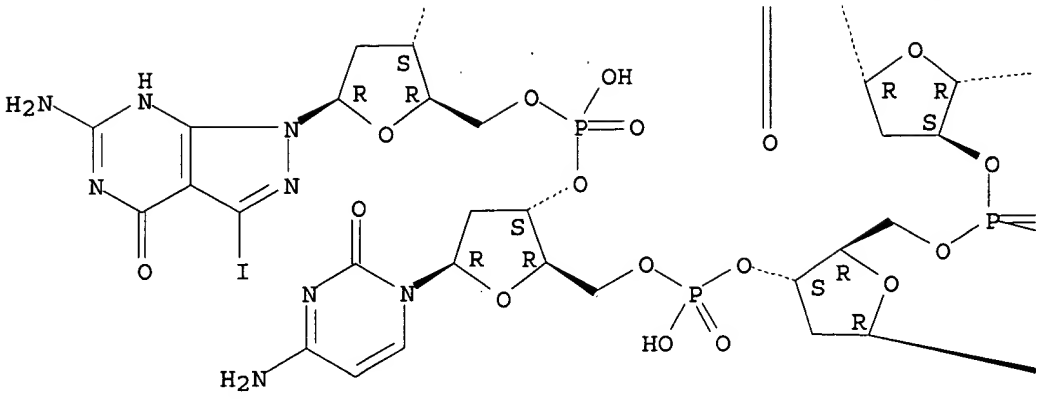
PAGE 1-A



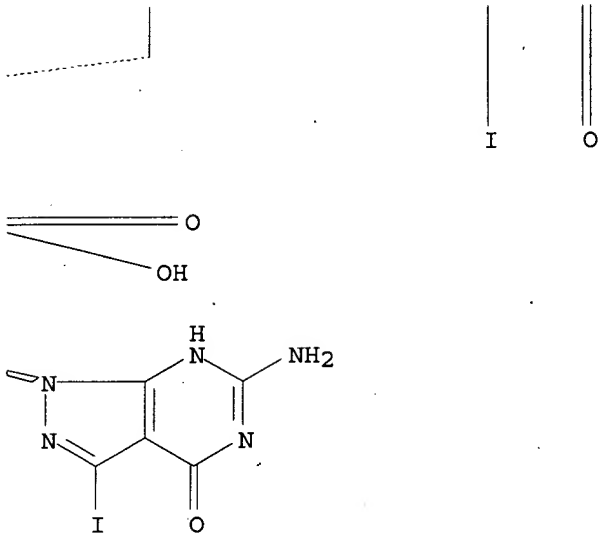
PAGE 1-B



PAGE 2-A



PAGE 2-B



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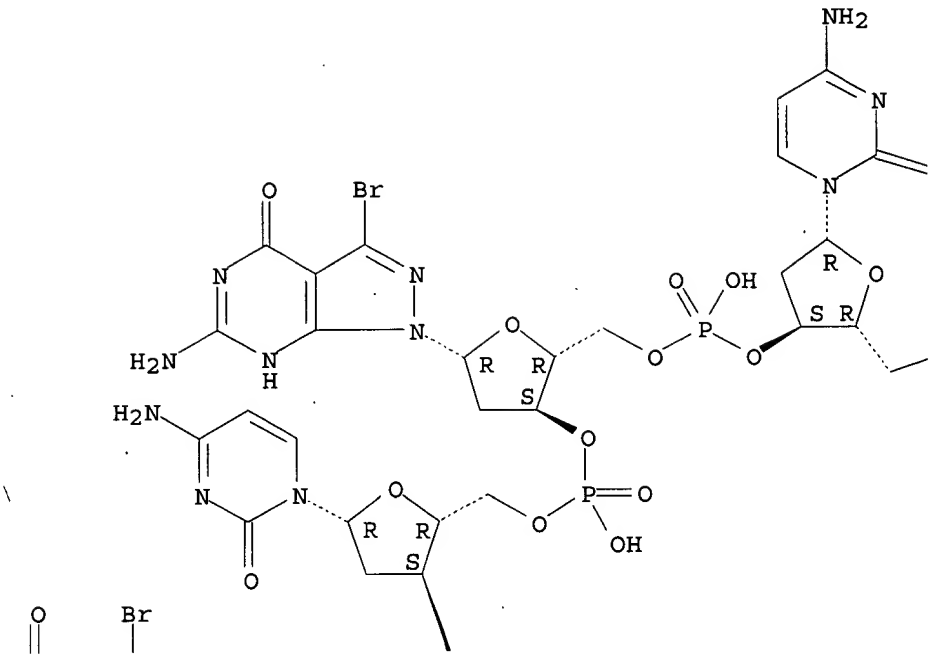
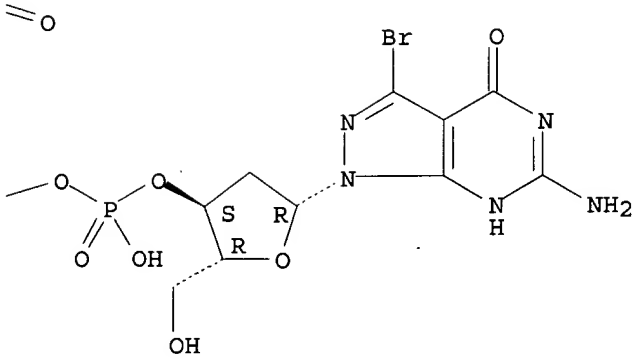
Absolute stereochemistry.

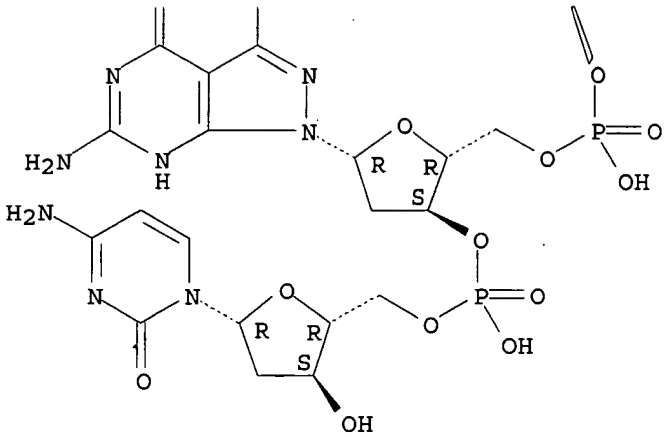
PAGE 1-A



PAGE 1-B



PAGE 2-A



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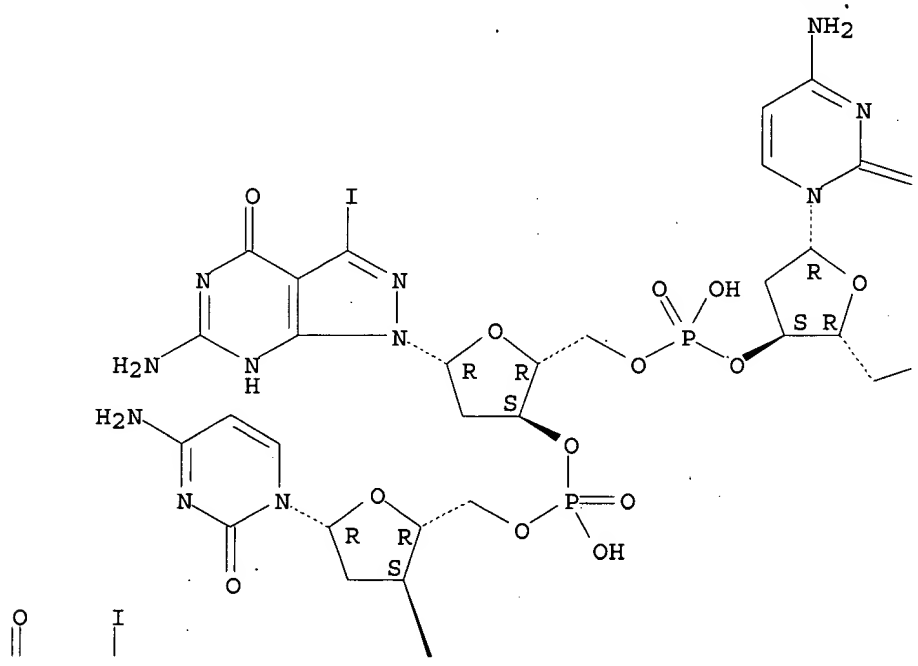
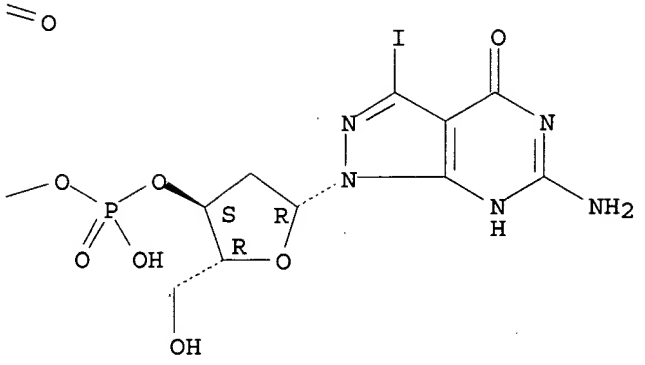
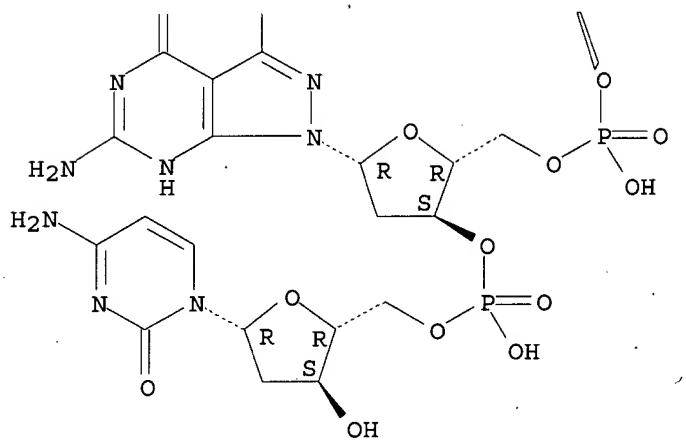
Absolute stereochemistry.

PAGE 1-A







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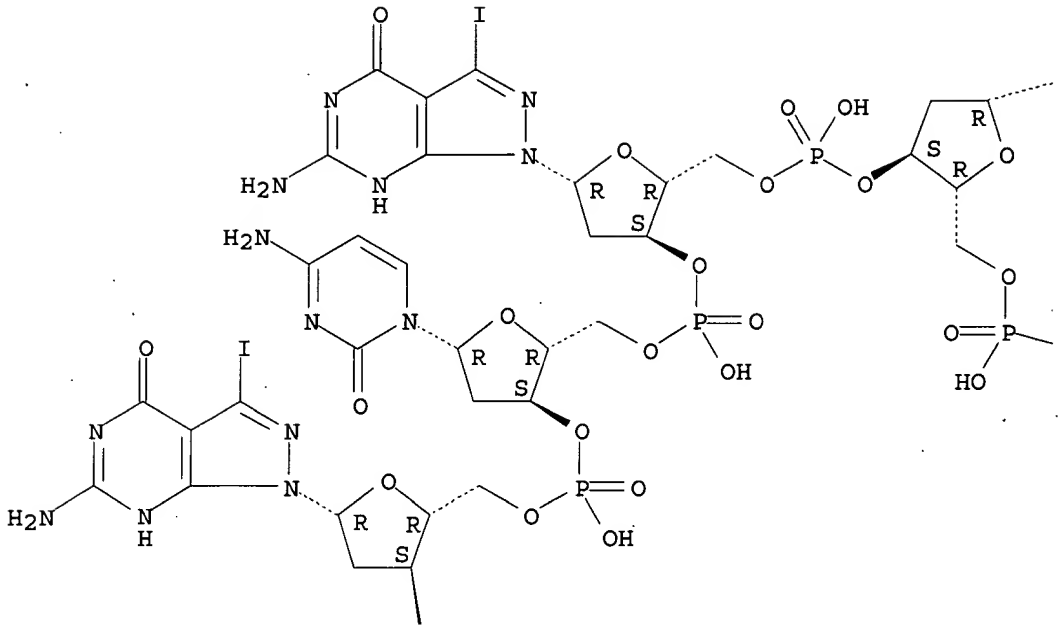
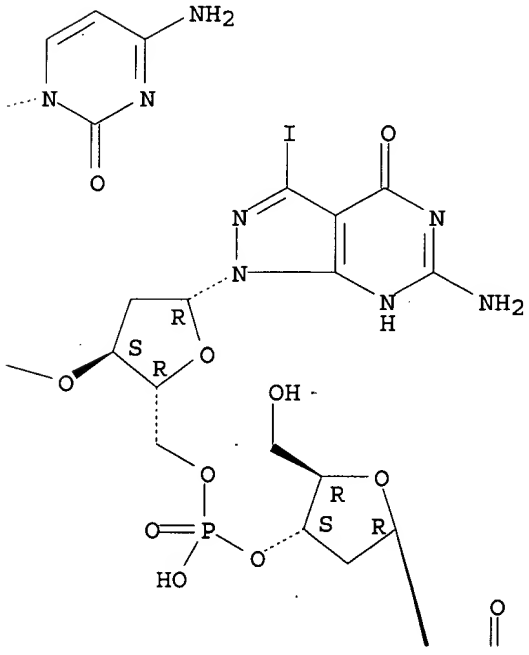
Absolute stereochemistry.

PAGE 1-A

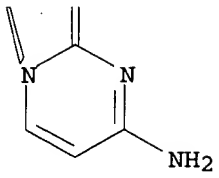


PAGE 1-B



PAGE 2-A

PAGE 2-B



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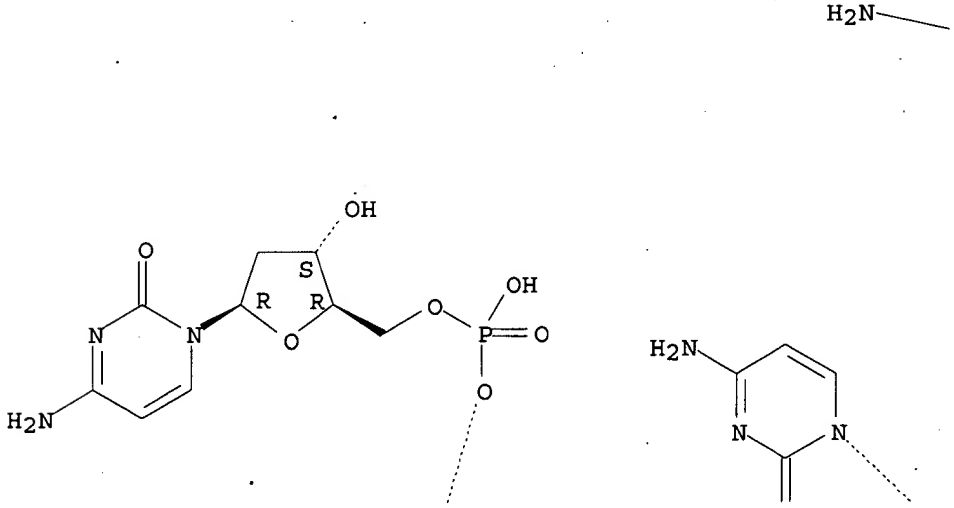
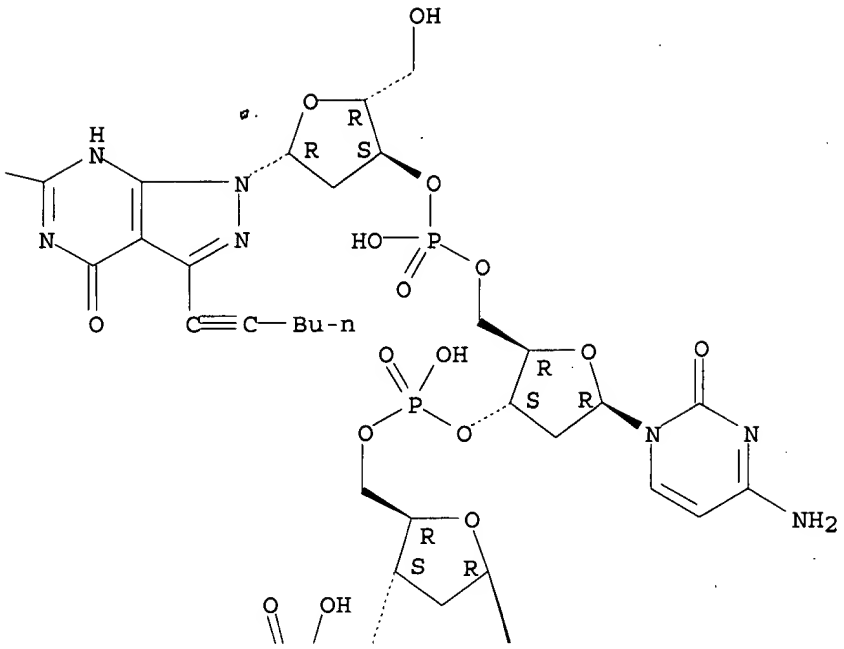
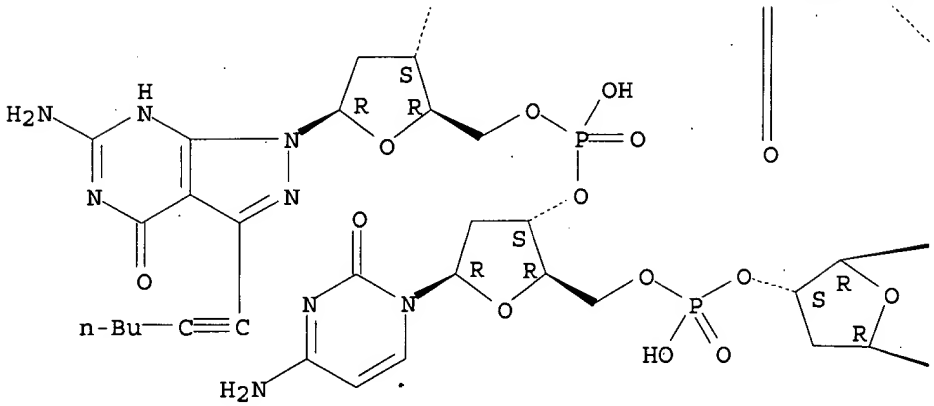
Absolute stereochemistry.

PAGE 1-A







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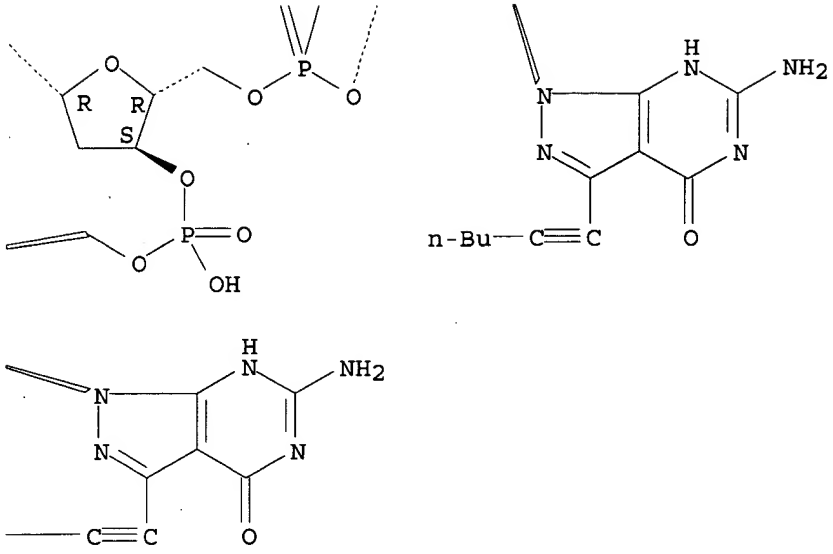

RN 252761-77-6 CAPLUS
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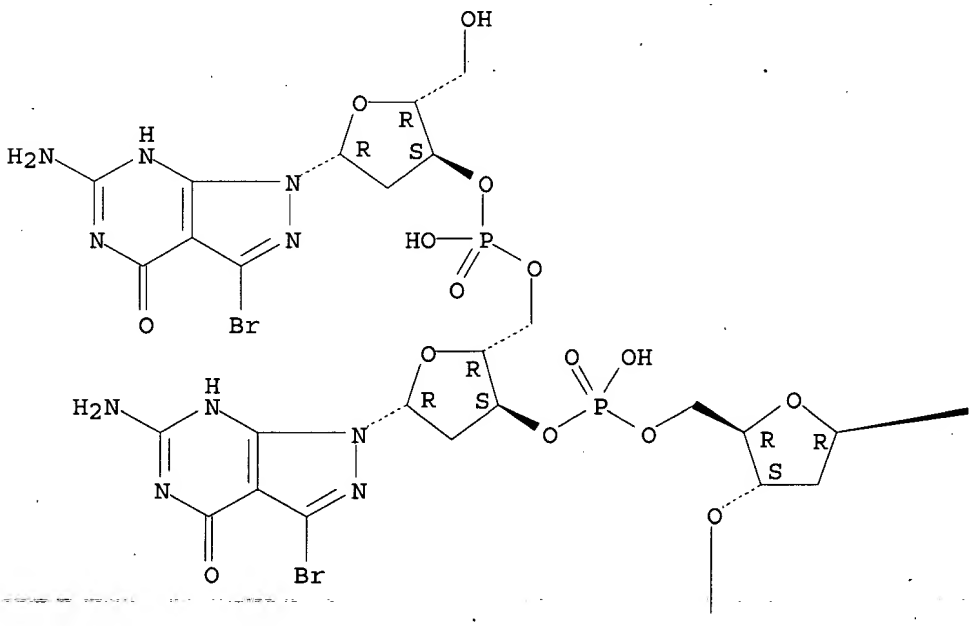
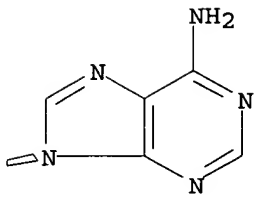
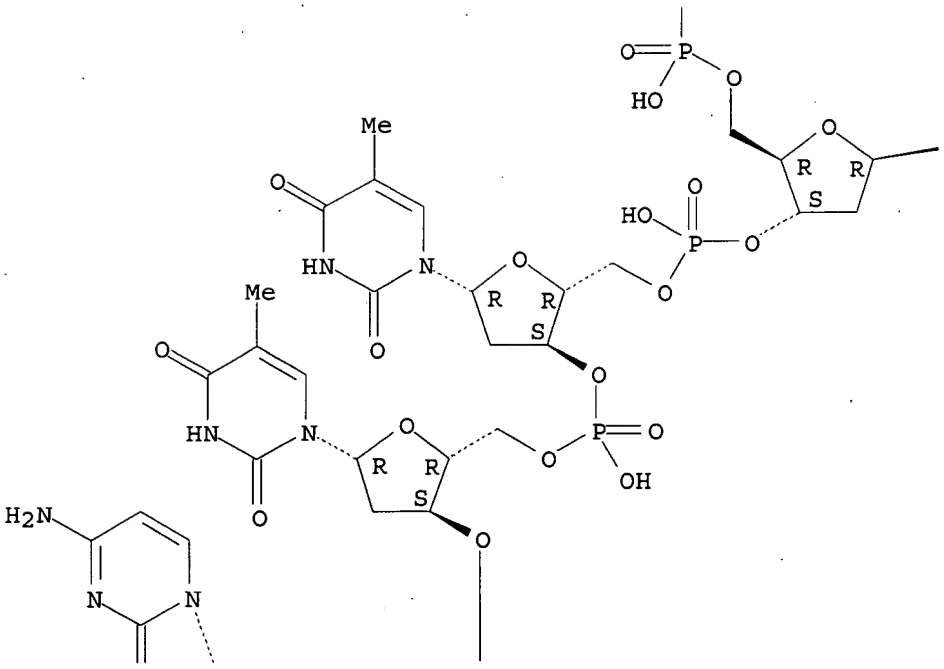
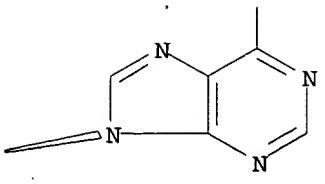
Absolute stereochemistry.



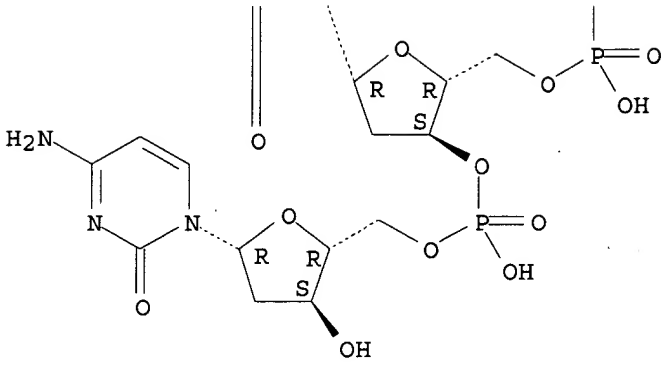




PAGE 2-B



PAGE 3-A

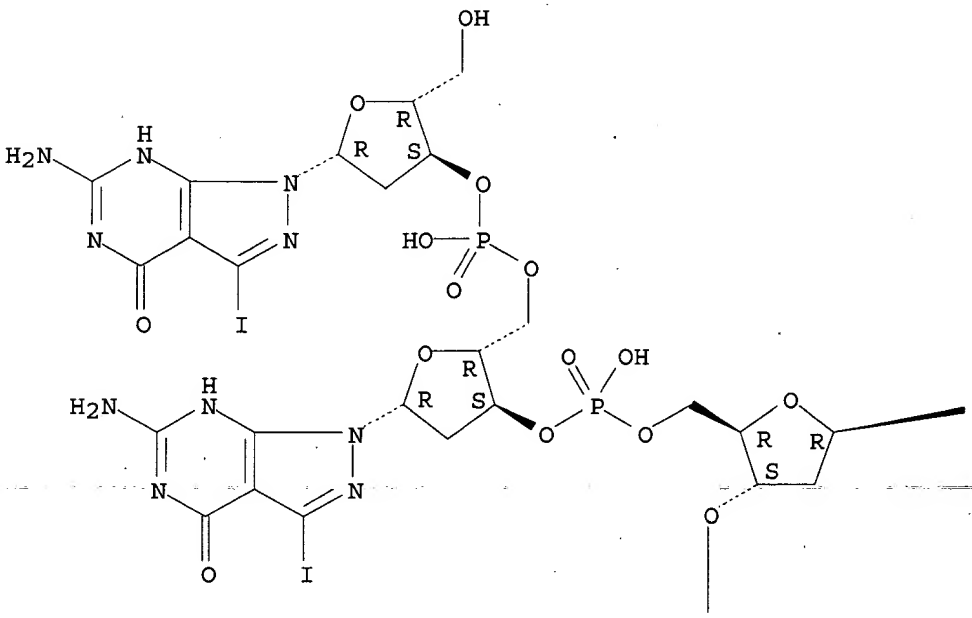


RN 252761-78-7 CAPLUS

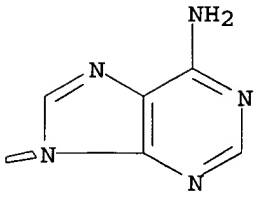
CN Cytidine, 2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

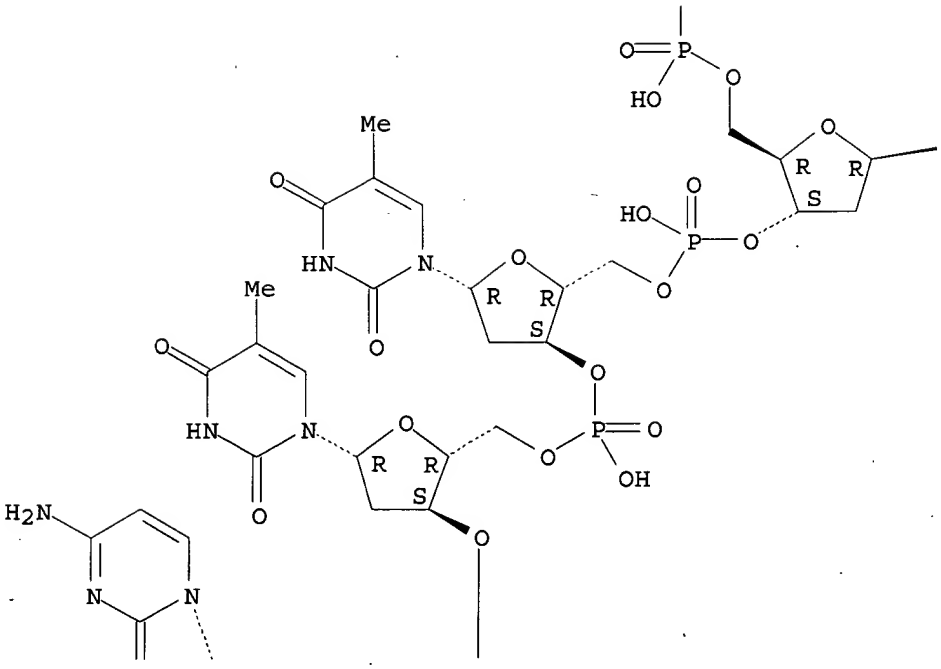
PAGE 1-A



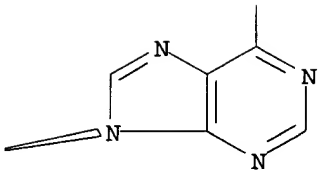
PAGE 1-B



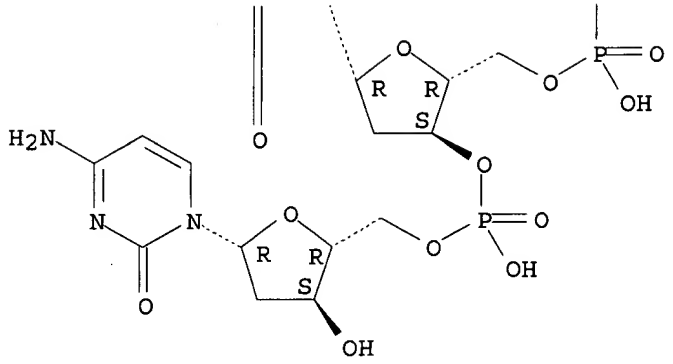
PAGE 2-A



PAGE 2-B



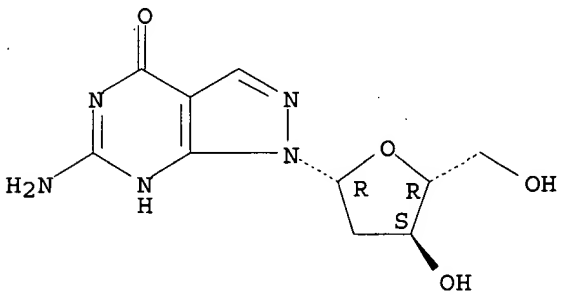
PAGE 3-A



IT **100644-70-0 118907-70-3 183274-52-4**
183274-53-5 214770-07-7 214770-12-4
215178-26-0 215178-27-1 252761-82-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of oligonucleotides contg. pyrazolo[3,4-d]pyrimidines and the influence of substituted deazadeoxyguanosines on the duplex structure and stability)

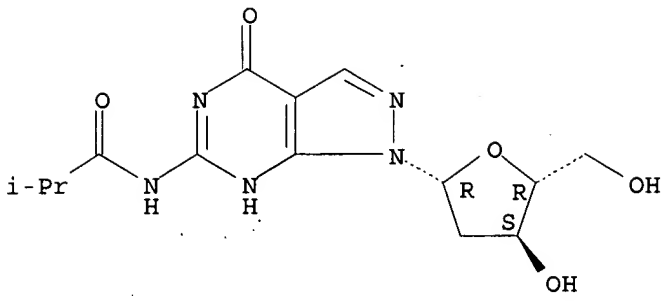
RN 100644-70-0 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



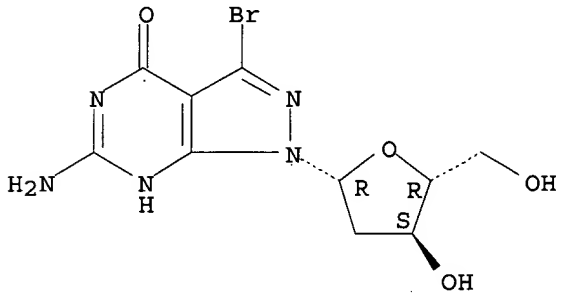
RN 118907-70-3 CAPLUS
CN Propanamide, N-[1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



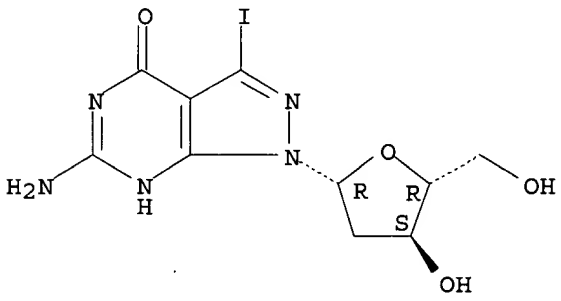
RN 183274-52-4 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-3-bromo-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



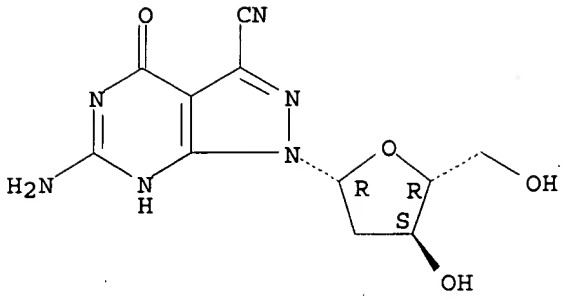
RN 183274-53-5 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro-3-iodo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



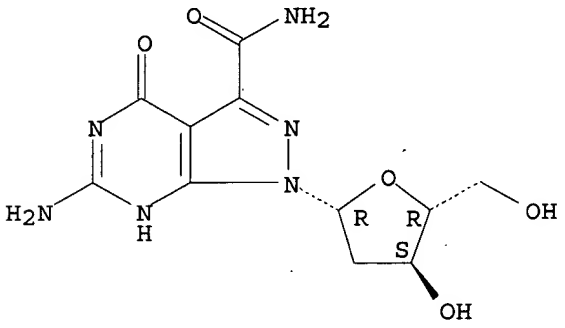
RN 214770-07-7 CAPLUS
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carbonitrile, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-4,5-dihydro-4-oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



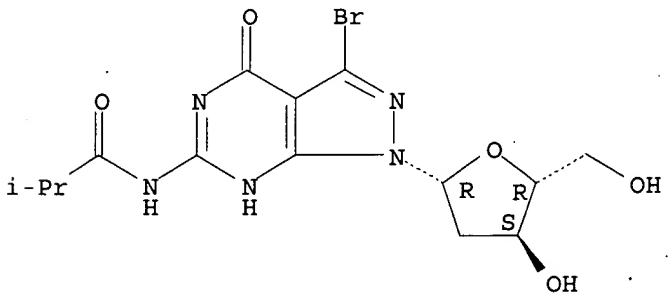
RN 214770-12-4 CAPLUS
CN 1H-Pyrazolo[3,4-d]pyrimidine-3-carboxamide, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-4,5-dihydro-4-oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



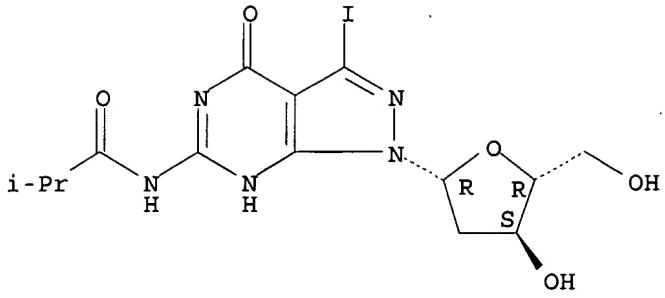
RN 215178-26-0 CAPLUS
CN Propanamide, N-[3-bromo-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



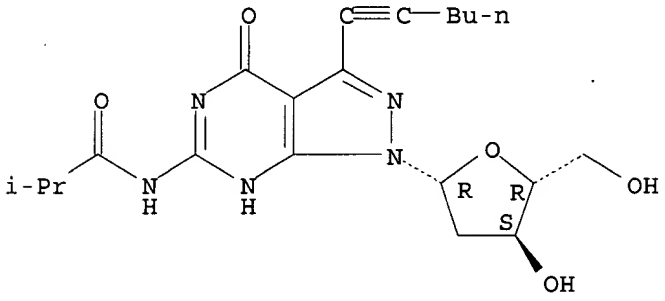
RN 215178-27-1 CAPLUS
CN Propanamide, N-[1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-4,5-dihydro-3-iodo-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 252761-82-3 CAPLUS
CN Propanamide, N-[1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-3-(1-hexynyl)-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

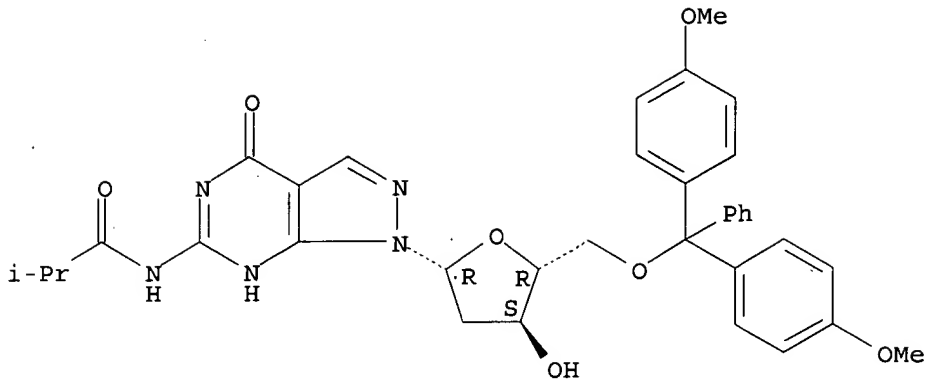
Absolute stereochemistry.



IT **118907-71-4P 118907-80-5P 121742-44-7P**
215178-29-3P 215178-31-7P 215178-32-8P
215178-35-1P 215178-36-2P 215178-70-4P
215178-71-5P 252761-75-4P 252761-76-5P
252761-77-6P 252761-78-7P 252761-81-2P
252761-83-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of oligonucleotides contg. pyrazolo[3,4-d]pyrimidines and the influence of substituted deazadeoxyguanosines on the duplex structure and stability)

RN 118907-71-4 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

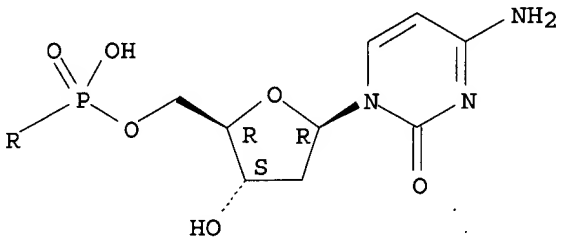


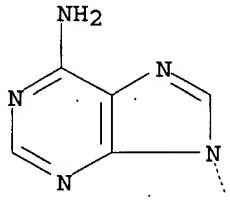
RN 118907-80-5 CAPLUS

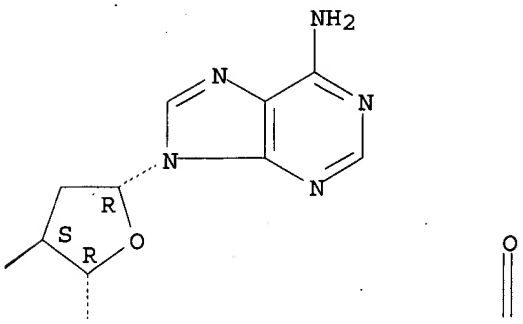
CN Cytidine, 2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

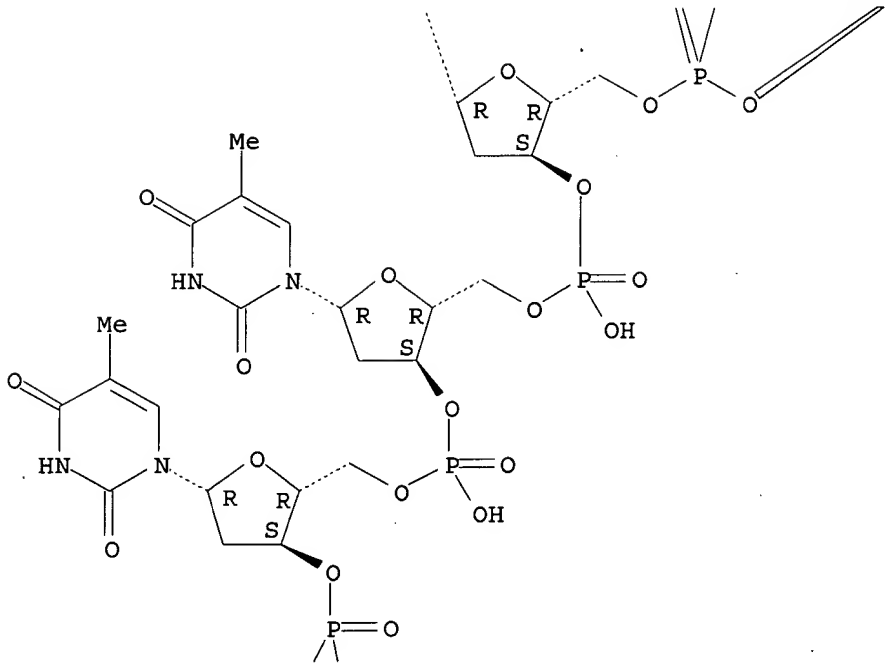
Absolute stereochemistry.

PAGE 1-A

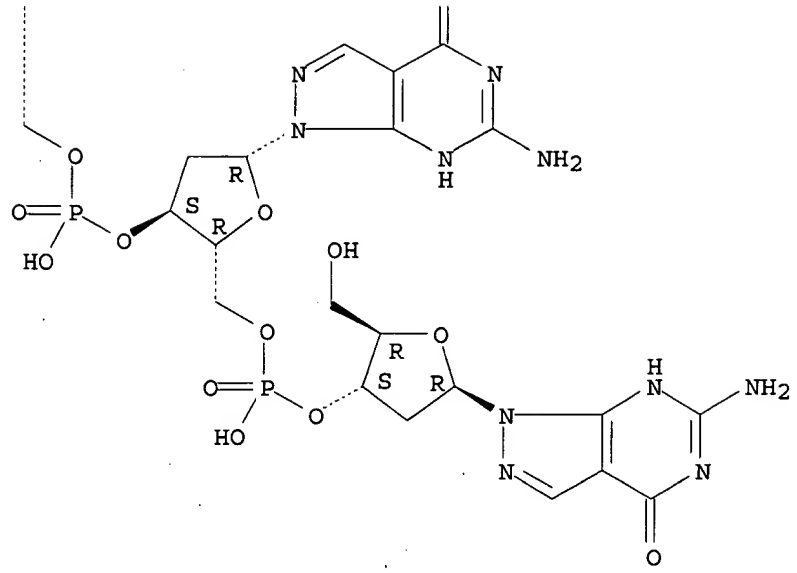




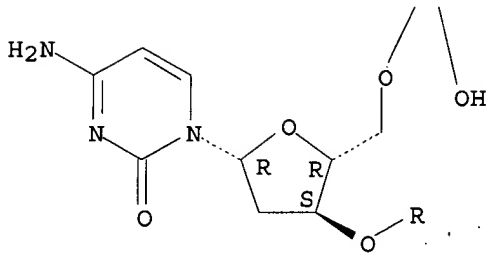




PAGE 2-B



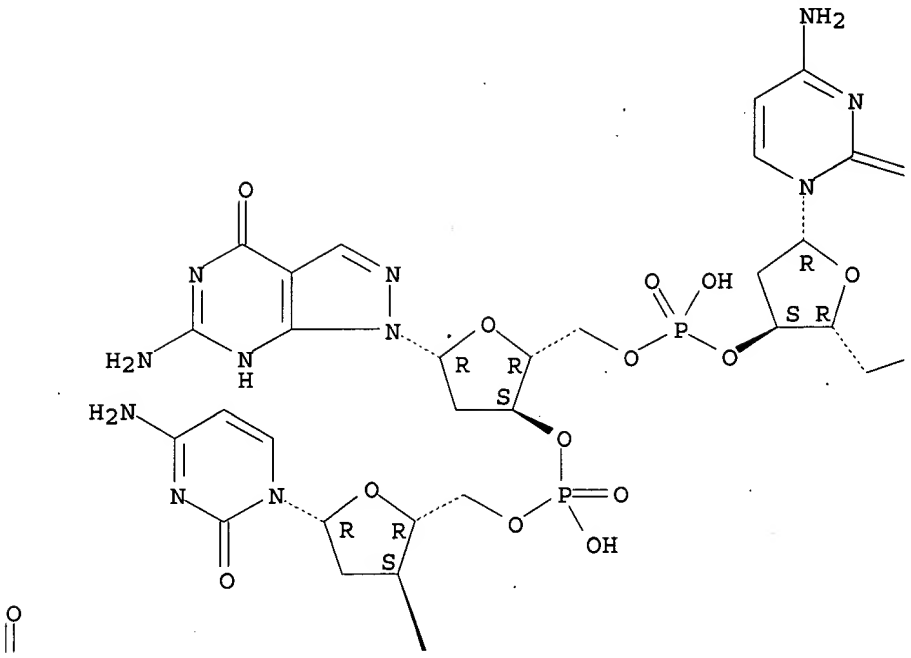
PAGE 3-A



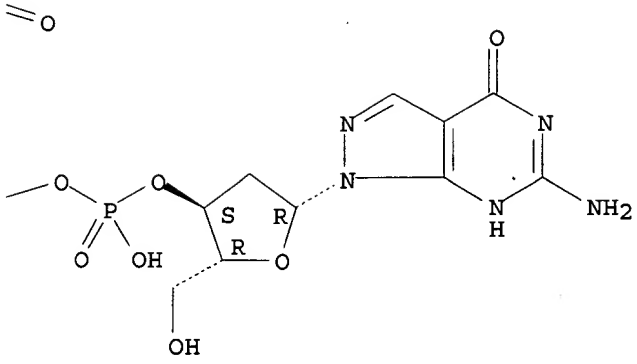
RN 121742-44-7 CAPLUS
CN Cytidine, 2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

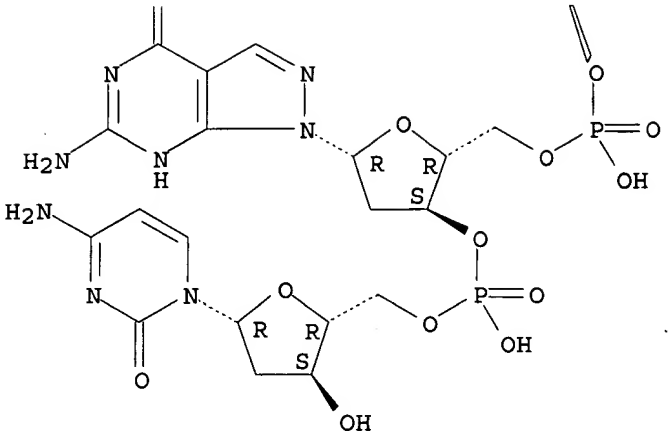
PAGE 1-A



PAGE 1-B



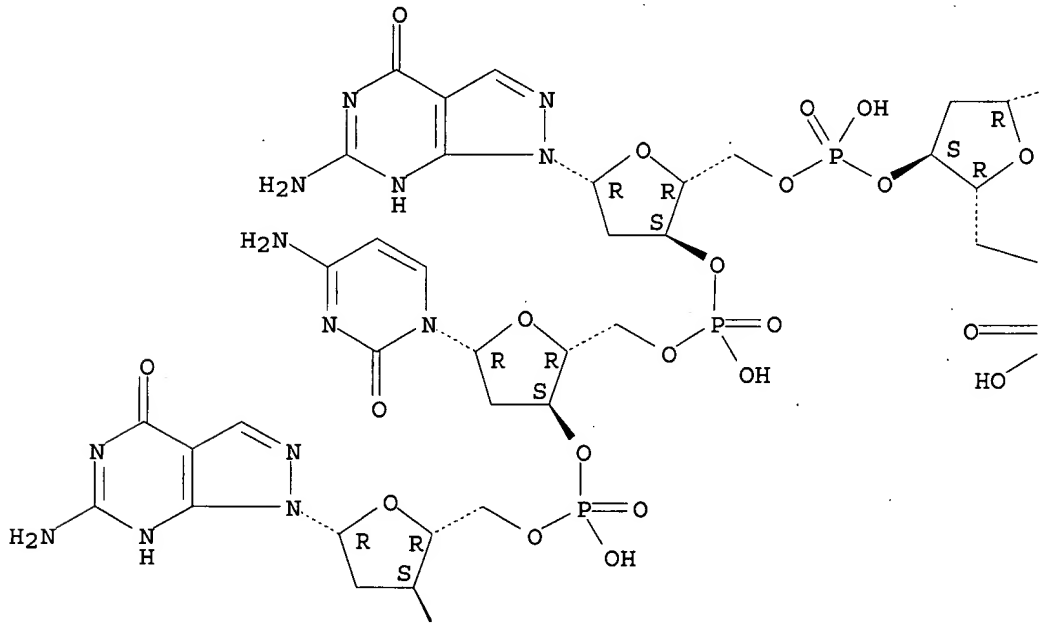
PAGE 2-A



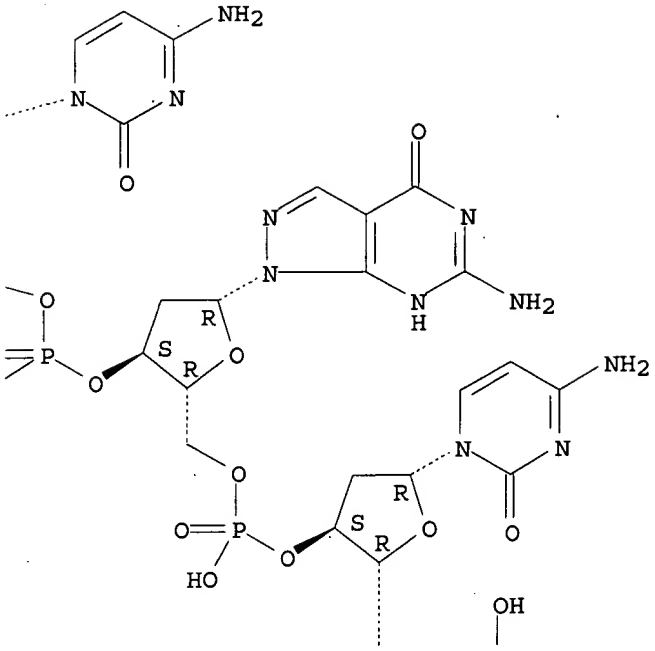
RN 215178-29-3 CAPLUS
CN Cytidine, 2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

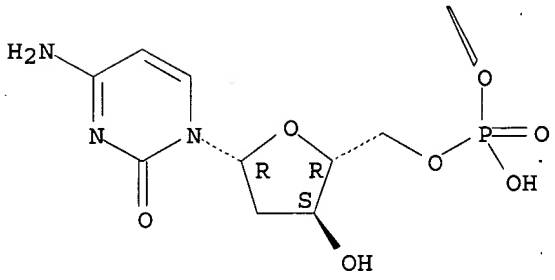
PAGE 1-A



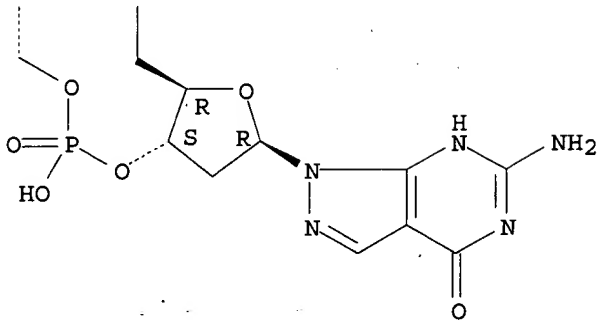
PAGE 1-B



PAGE 2-A



PAGE 2-B

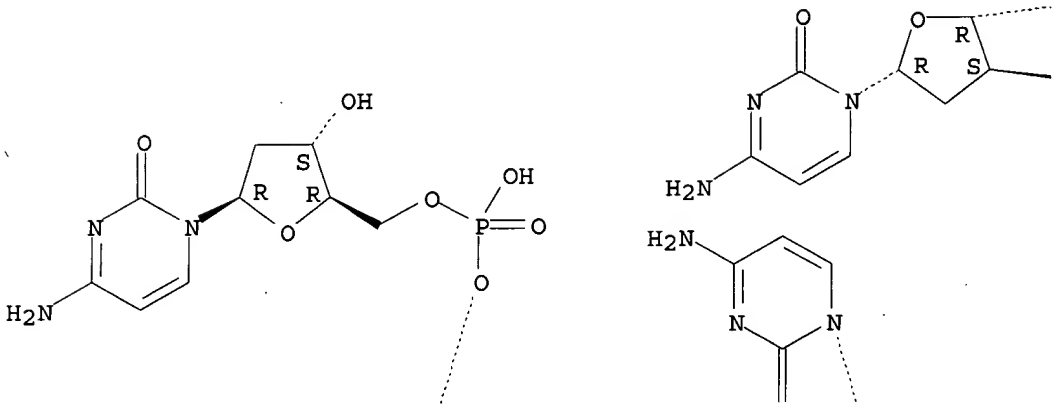


RN 215178-31-7 CAPLUS
CN Cytidine, 7-bromo-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-7-bromo-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-7-bromo-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-7-bromo-2'-

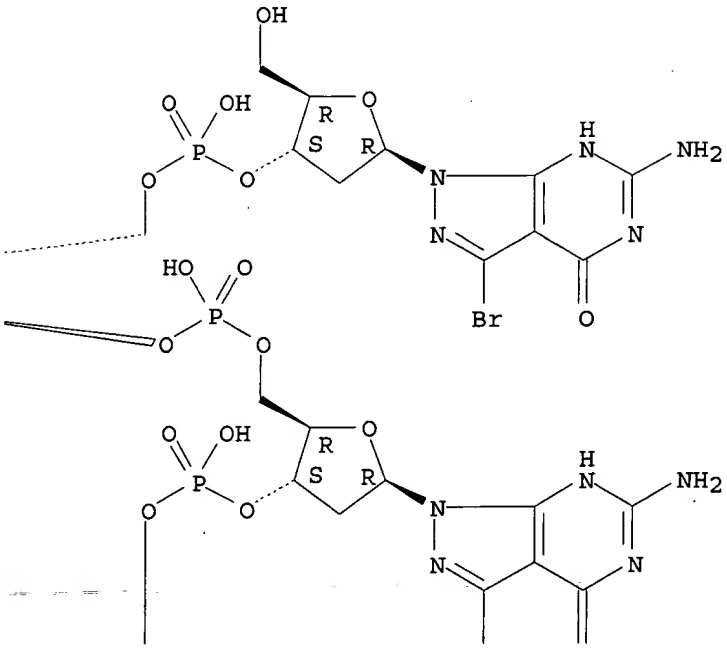
deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

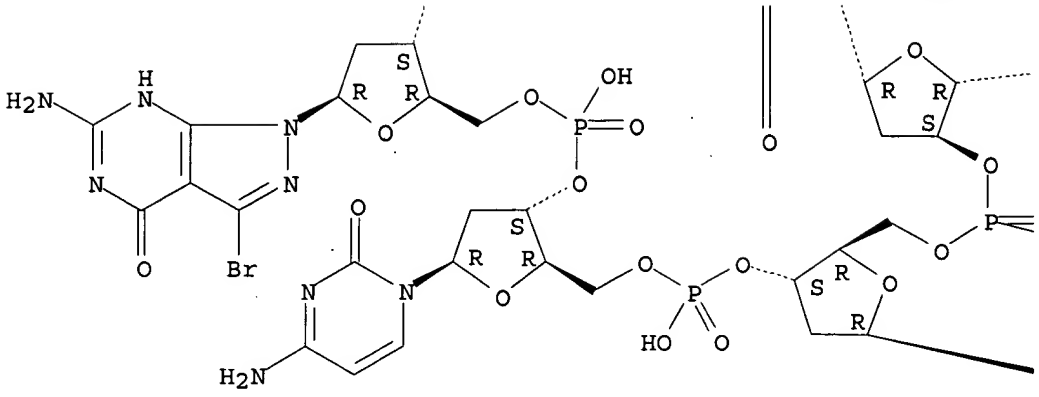
PAGE 1-A



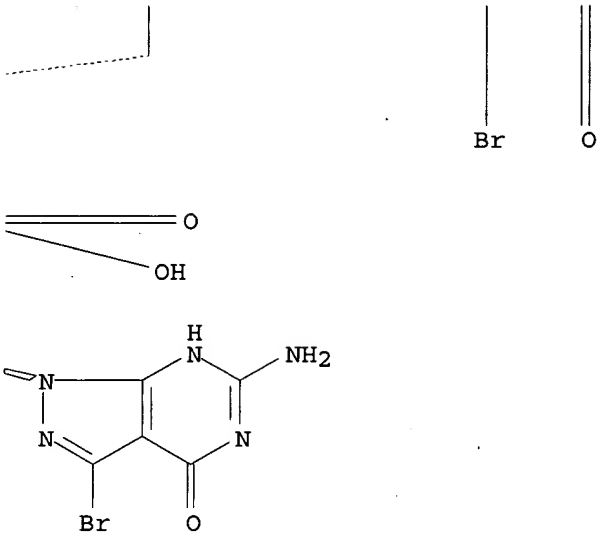
PAGE 1-B



PAGE 2-A



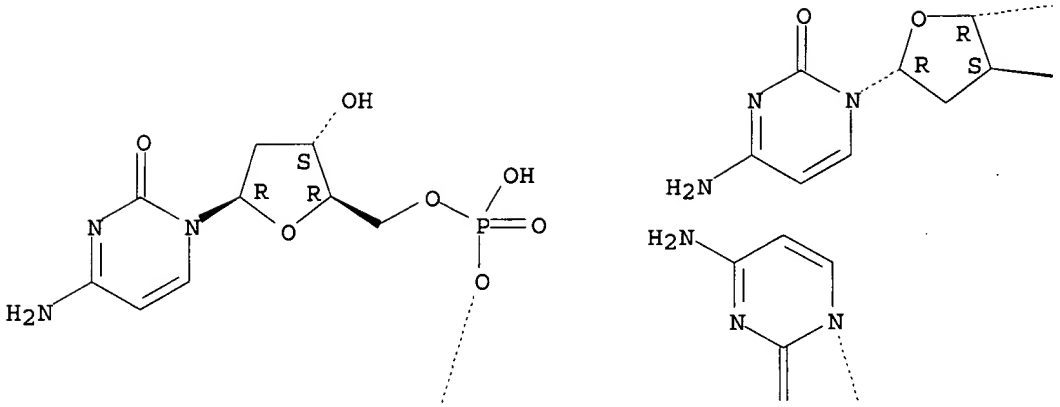
PAGE 2-B

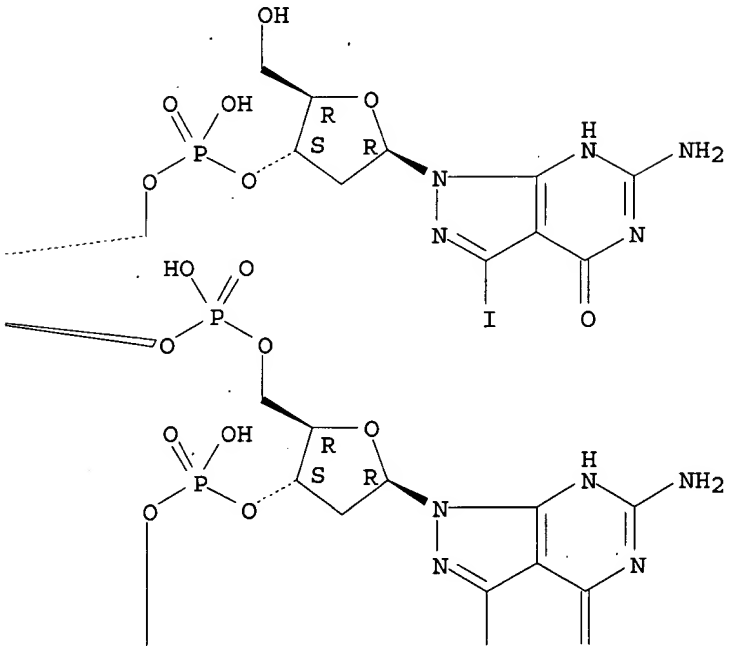


RN 215178-32-8 CAPLUS

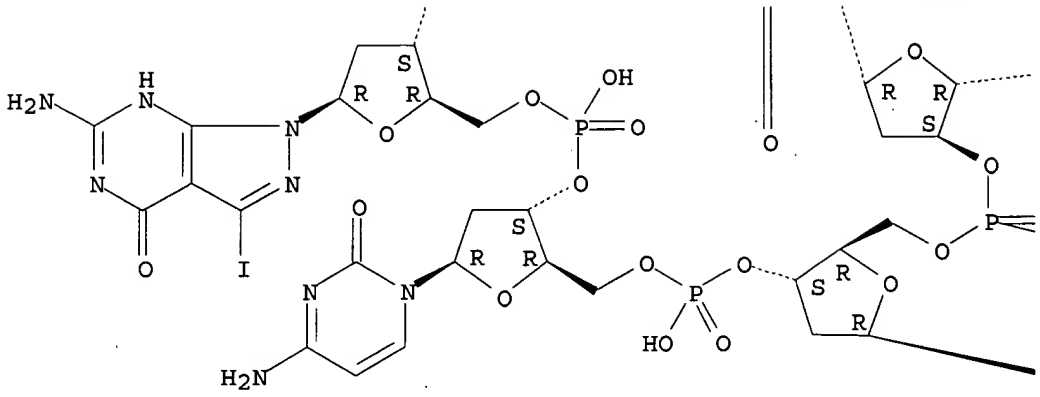
CN Cytidine, 2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

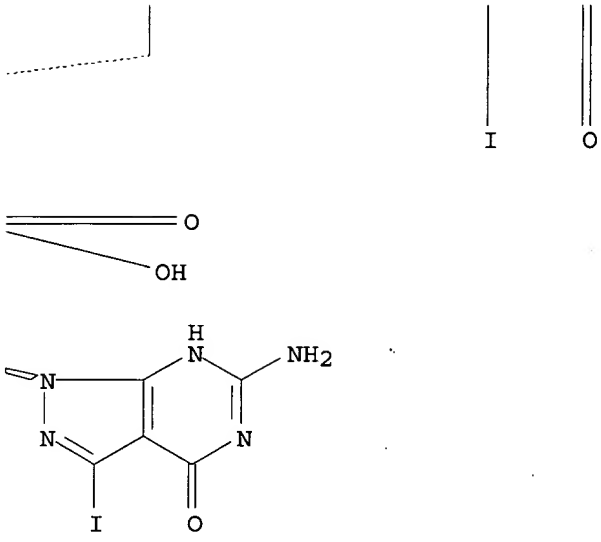




PAGE 2-A



PAGE 2-B

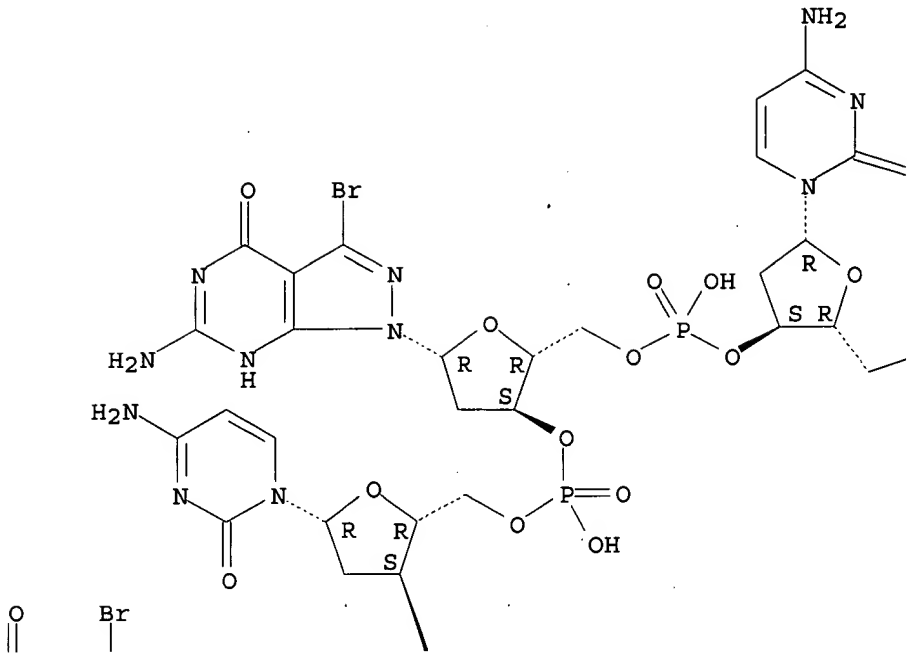


RN 215178-35-1 CAPLUS

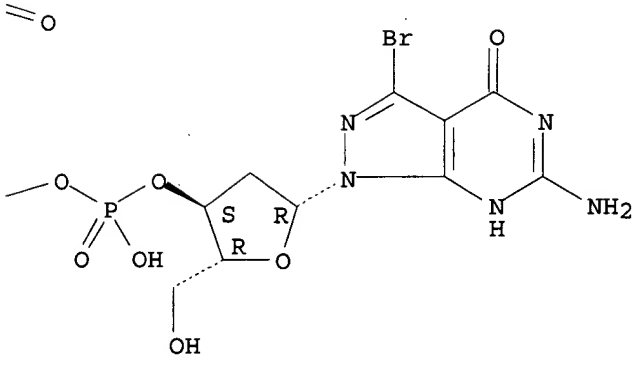
CN Cytidine, 7-bromo-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-7-bromo-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-7-bromo-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



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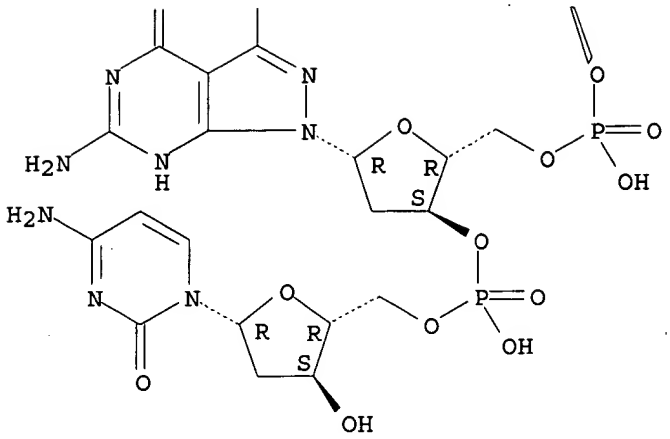
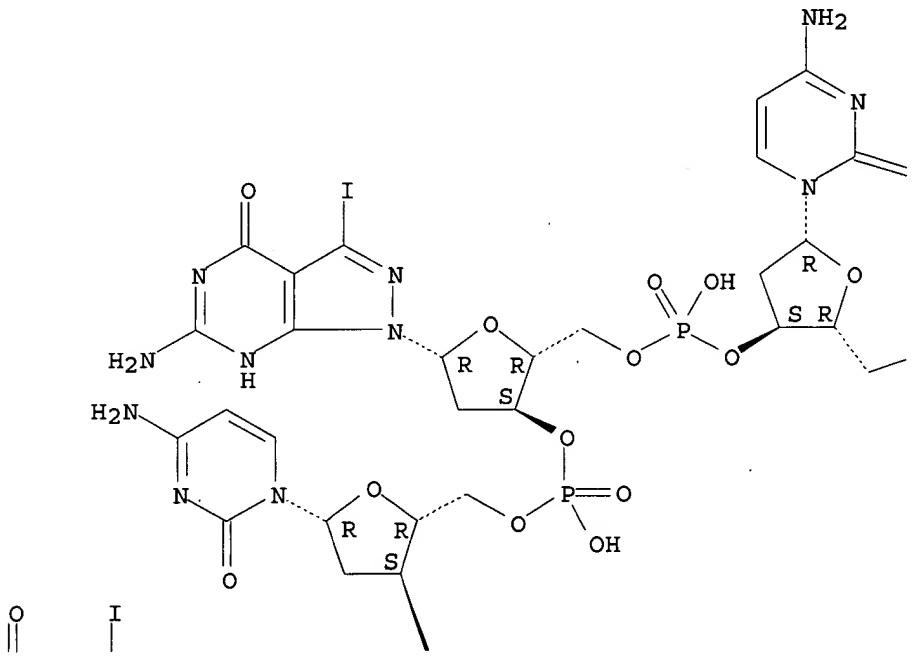
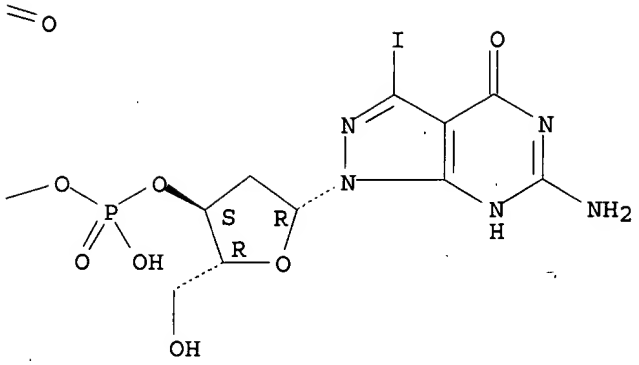


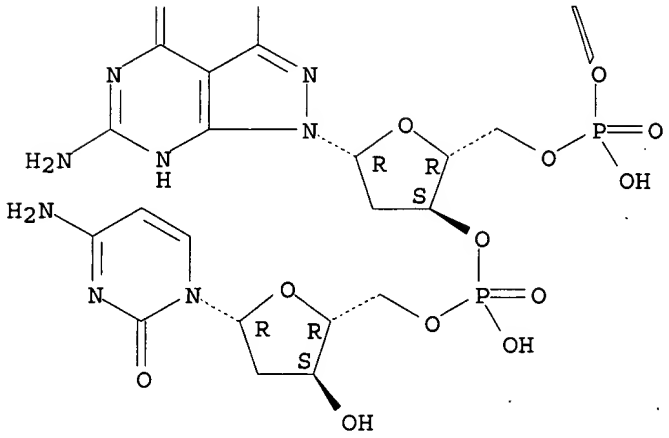
RN 215178-36-2 CAPLUS
CN Cytidine, 2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

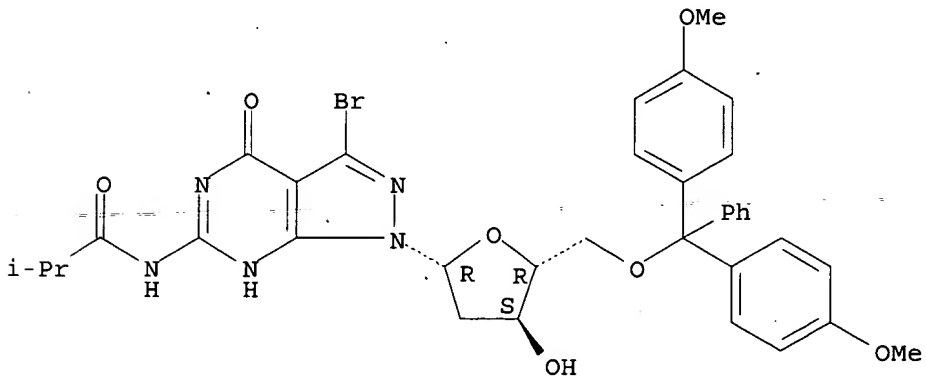






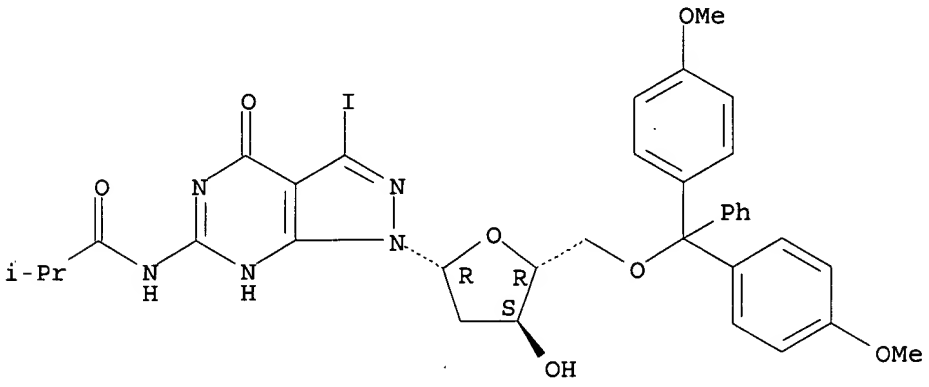
RN 215178-70-4 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-3-bromo-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



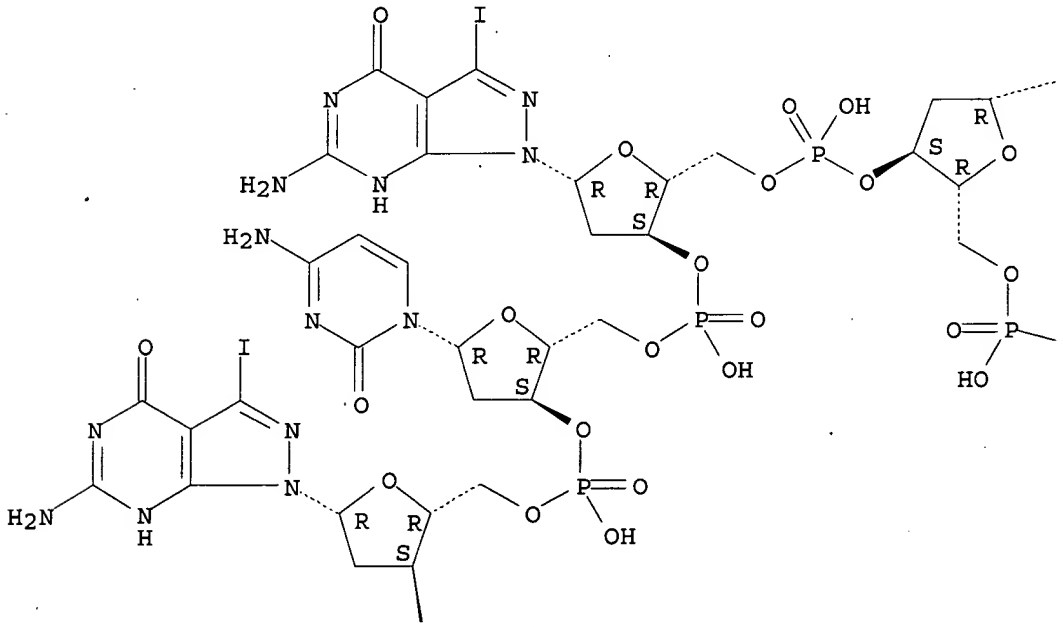
RN 215178-71-5 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-3-iodo-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 252761-75-4 CAPLUS
CN 8-Aza-7-deazaguanosine, 2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-iodo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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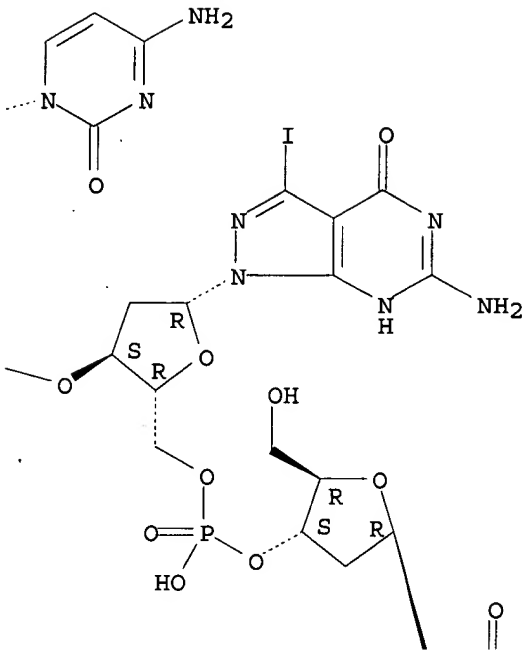
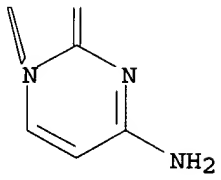


PAGE 2-A

PAGE 2-B

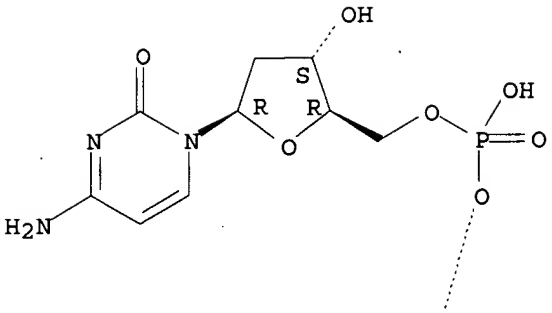


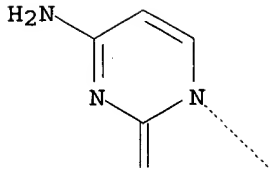
RN 252761-76-5 CAPLUS

CN Cytidine, 2'-deoxy-7-(1-hexynyl)-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-(1-hexynyl)-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-(1-hexynyl)-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-7-(1-hexynyl)-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





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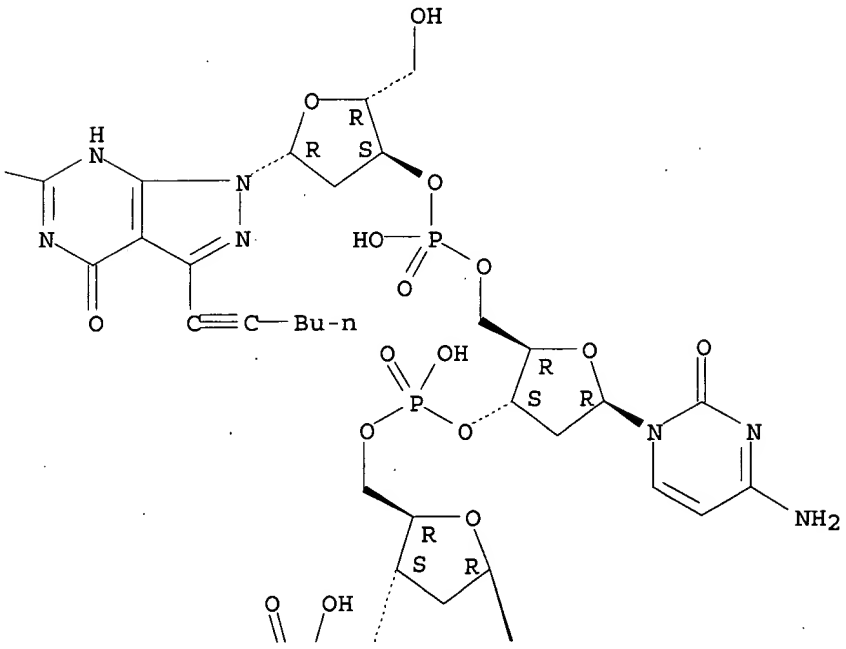

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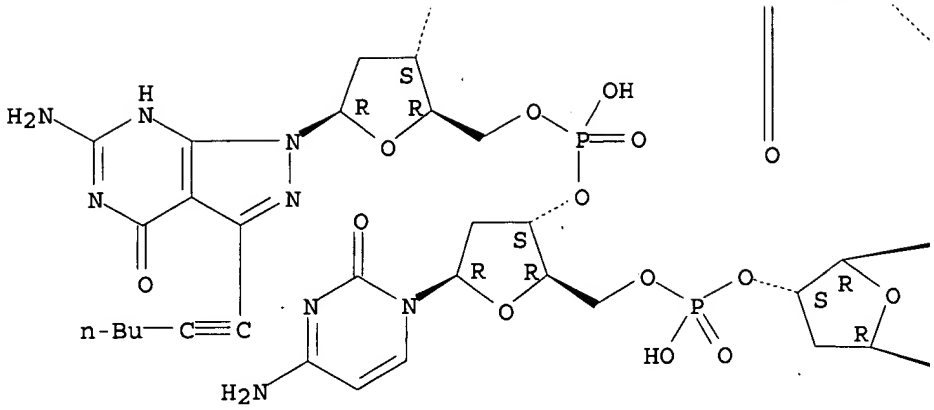
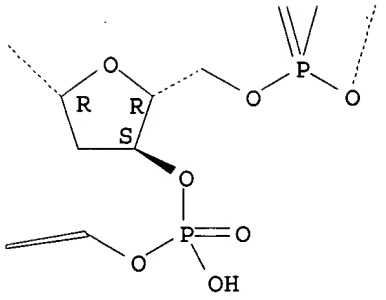
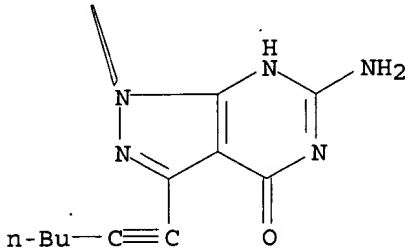
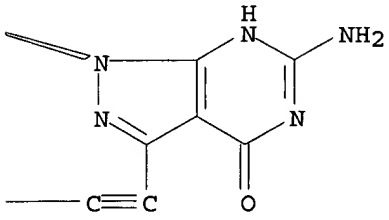


n-Bu—

PAGE 2-B





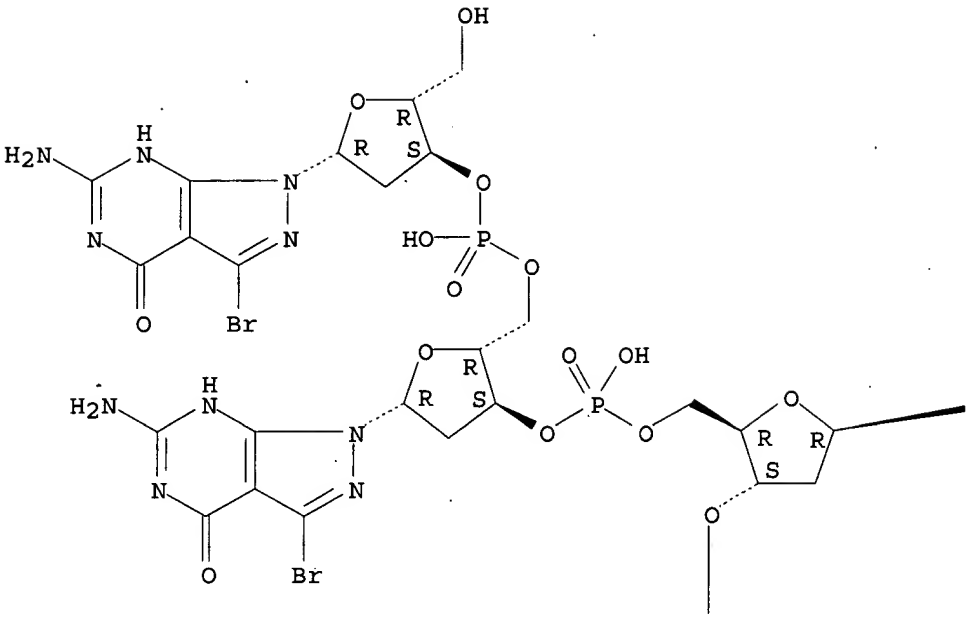


RN 252761-77-6 CAPLUS

CN Cytidine, 7-bromo-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-7-bromo-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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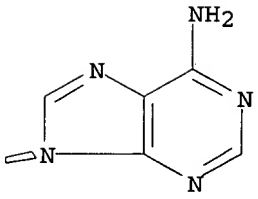

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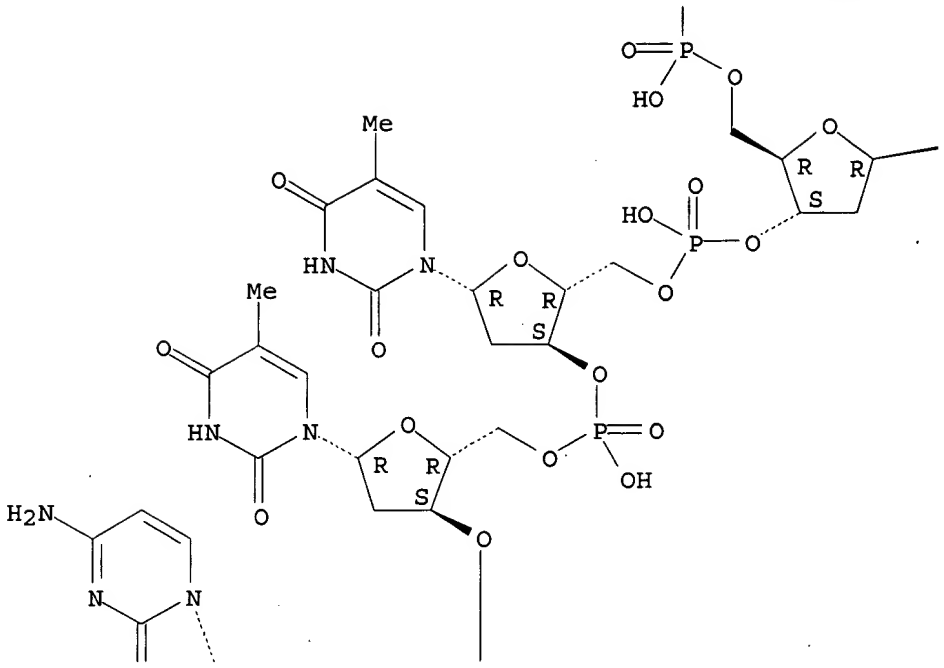

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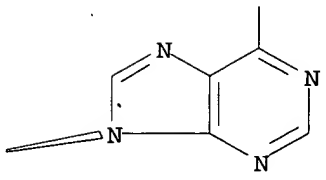

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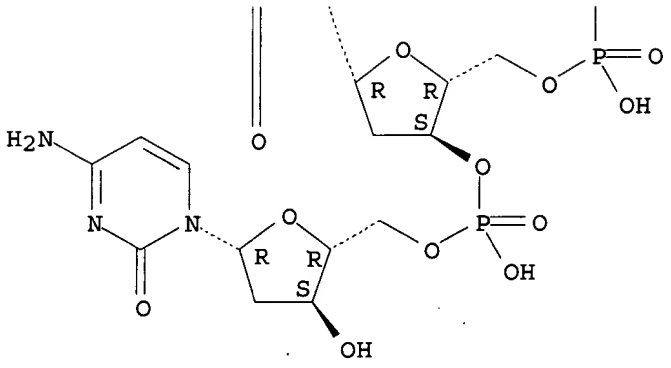
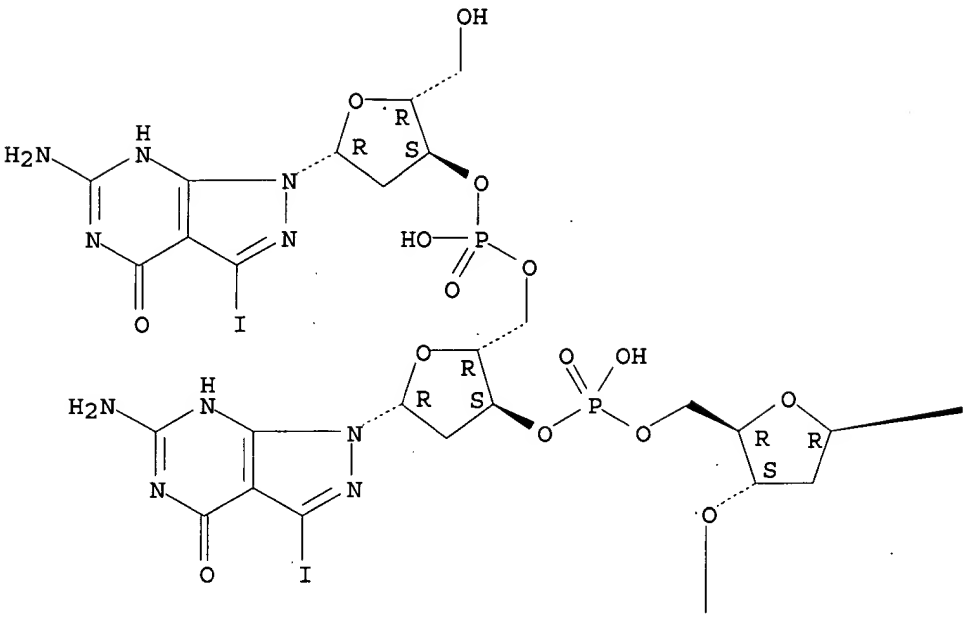


RN 252761-78-7 CAPLUS

CN Cytidine, 2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy-7-iodo-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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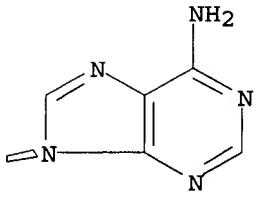

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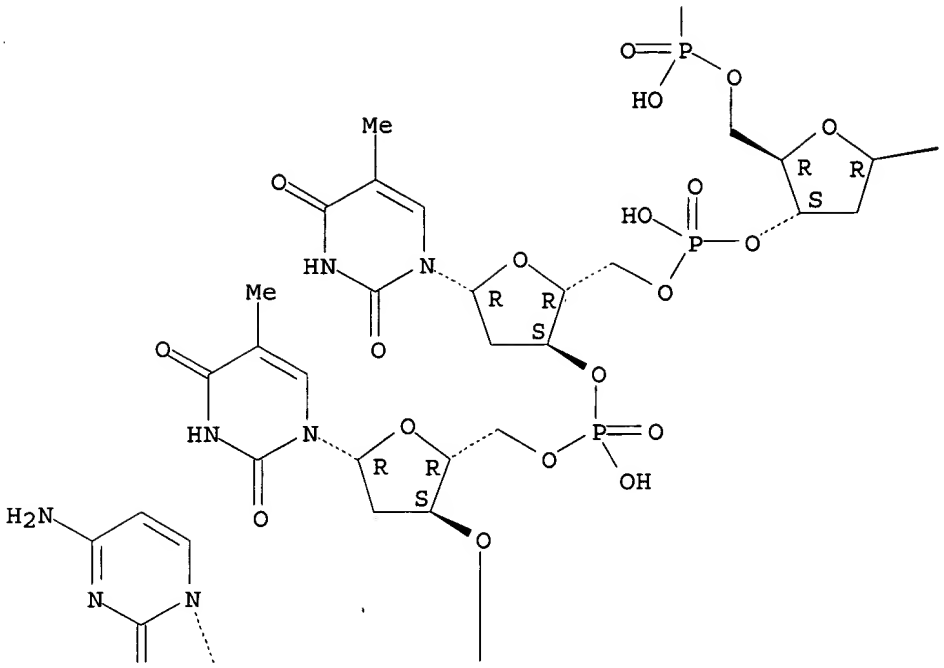

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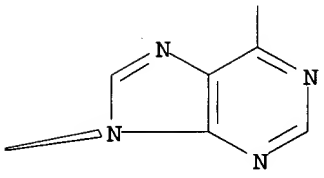

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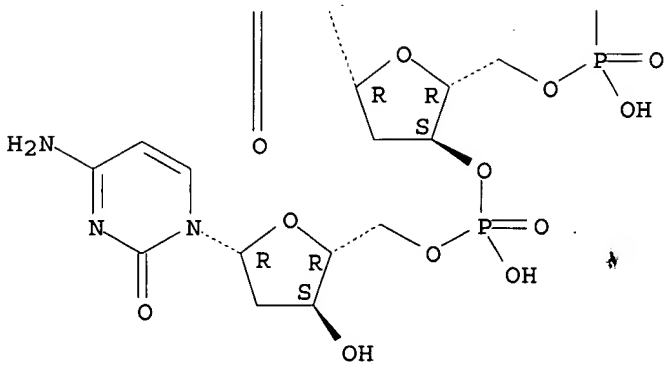
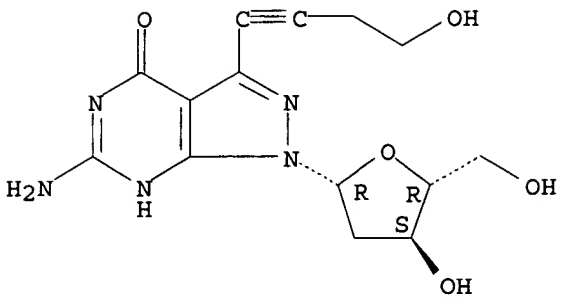


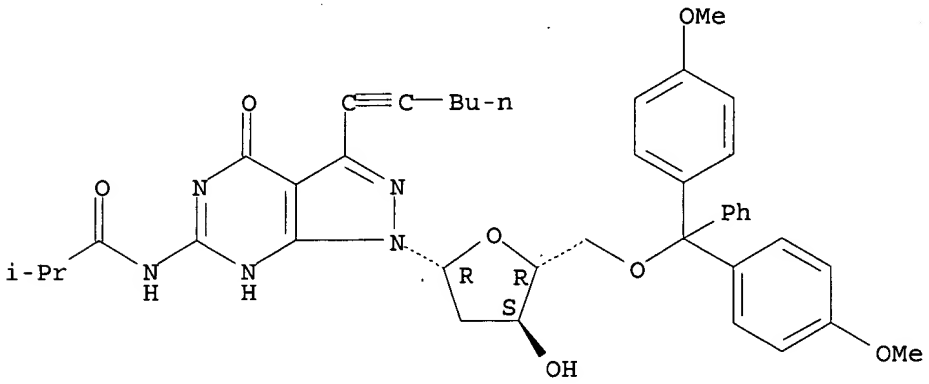
RN 252761-81-2 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro-3-(4-hydroxy-1-butynyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 252761-83-4 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-3-(1-hexynyl)-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

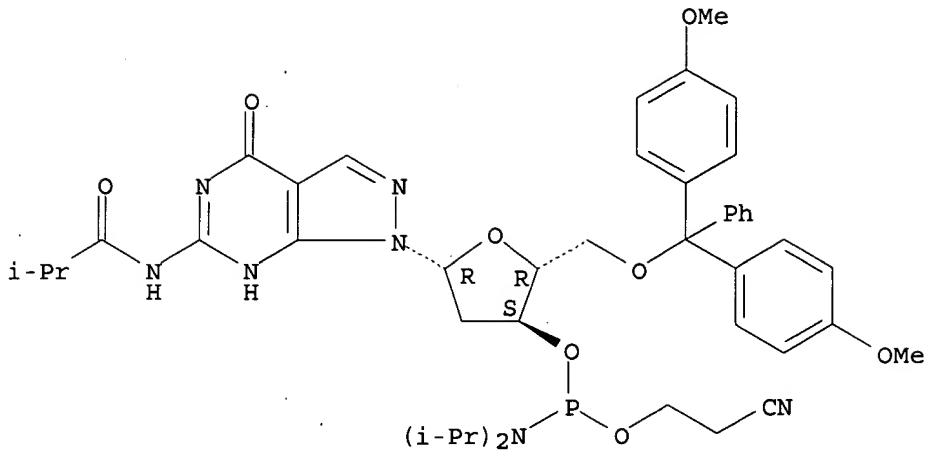
Absolute stereochemistry.



IT **118907-76-9P 183274-65-9P 183274-66-0P**
195378-59-7P 252761-73-2P 252761-79-8P
252761-80-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of oligonucleotides contg. pyrazolo[3,4-d]pyrimidines and the influence of substituted deazadeoxyguanosines on the duplex structure and stability)

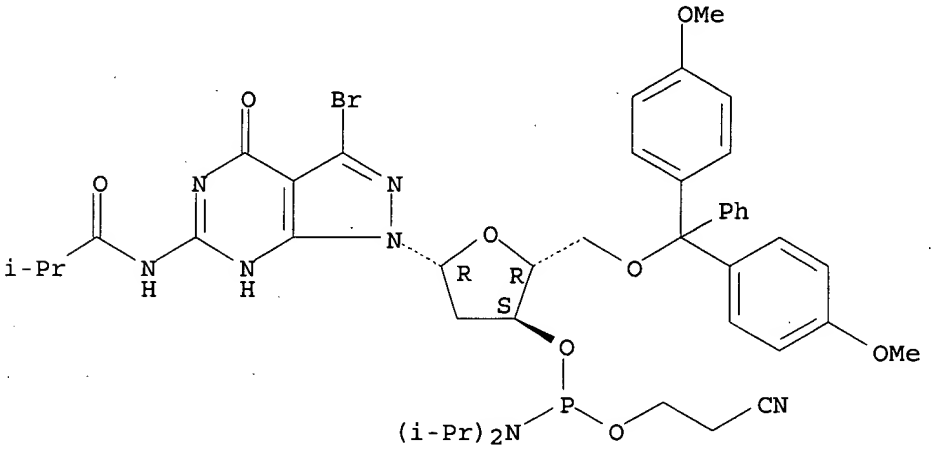
RN 118907-76-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



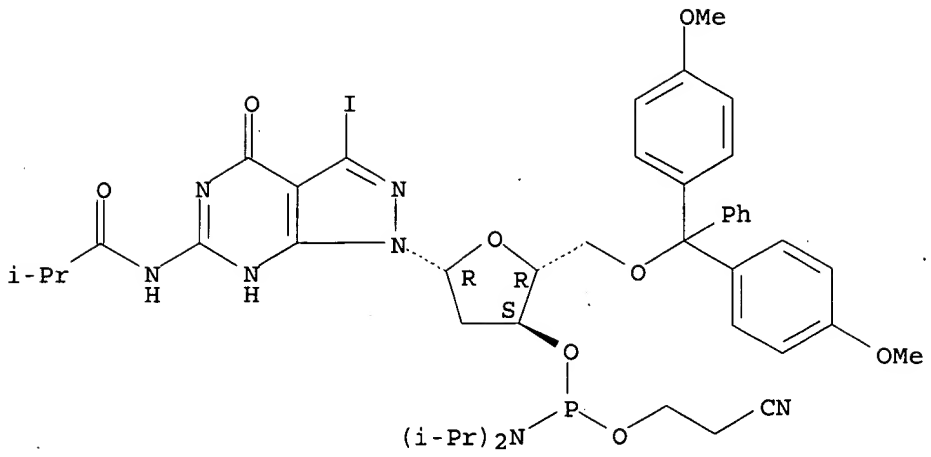
RN 183274-65-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-3-bromo-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



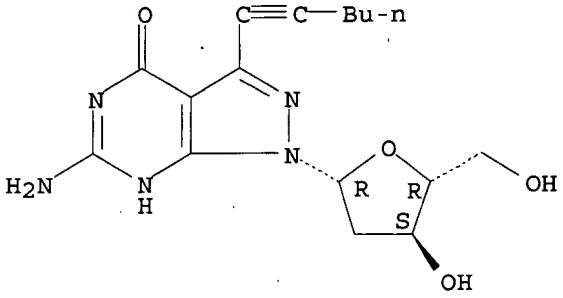
RN 183274-66-0 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-3-iodo-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



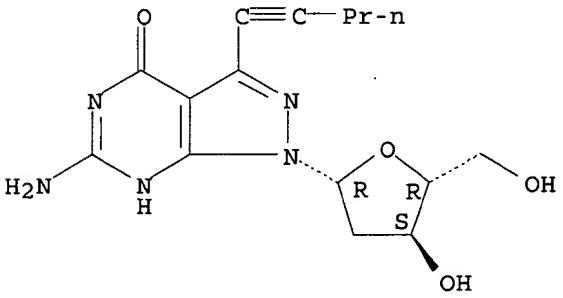
RN 195378-59-7 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-3-(1-hexynyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



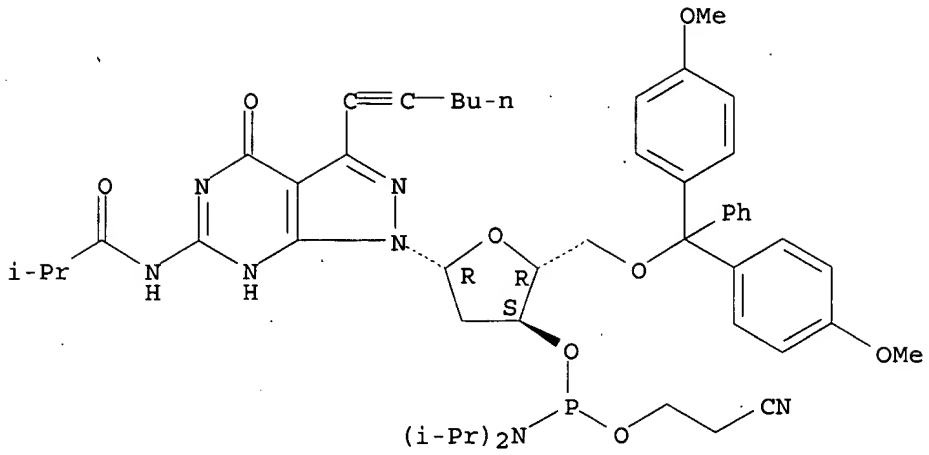
RN 252761-73-2 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro-3-(1-pentynyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



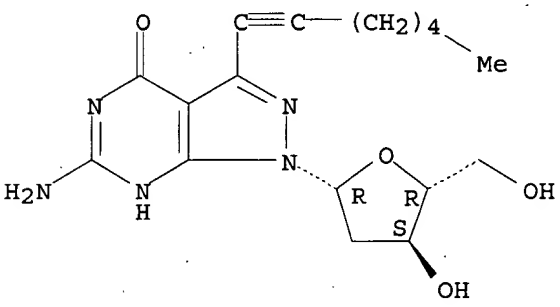
RN 252761-79-8 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-3-(1-hexynyl)-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



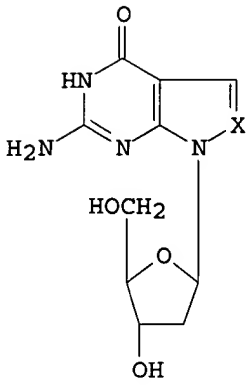
RN 252761-80-1 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-3-(1-heptynyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:458263 CAPLUS
DOCUMENT NUMBER: 111:58263
TITLE: Alternating d(G-C)3 and d(C-G)3 hexanucleotides containing 7-deaza-2'-deoxyguanosine or 8-aza-7-deaza-2'-deoxyguanosine in place of dG
AUTHOR(S): Seela, Frank; Driller, Hansjuergen
CORPORATE SOURCE: Fachber. Biol./Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.
SOURCE: Nucleic Acids Research (1989), 17(3), 901-10
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB The synthesis of alternating hexamers derived from d(C-G)3 or d(G-C)3 but contg. c7z8Gd (I, X = N) or c7Gd (I, X = CH) instead of dG is described employing **phosphoramidite**-chem. Apart from the isobutyryl group, the dimethylaminomethylene residue was used for the nucleobase-protection of I (X = CH). The methyl- and the cyanoethyl-**phosphoramidites** of I (X = CH) were prepd. They were employed together with those of c7G or c7z8Gd in automated oligonucleotide synthesis. Tm-values as well as thermodn. data of the oligomers indicated that duplexes were destabilized if c7Gd replaced dG, whereas c7z8Gd stabilized the duplex structure. In contrast to d(C-G)3 which underwent salt-dependent B-Z transition, the CD spectra of oligomers contg. c7Gd or c7z8Gd in place of dG showed retained .beta.-conformation.

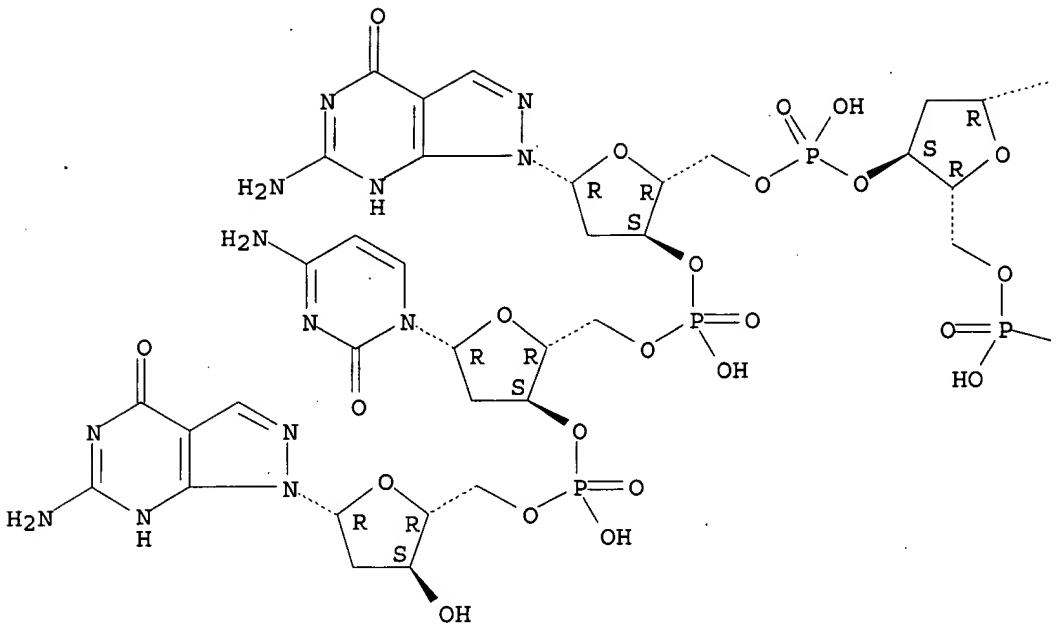
IT **121742-43-6P 121742-44-7P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and properties of)

RN 121742-43-6 CAPLUS

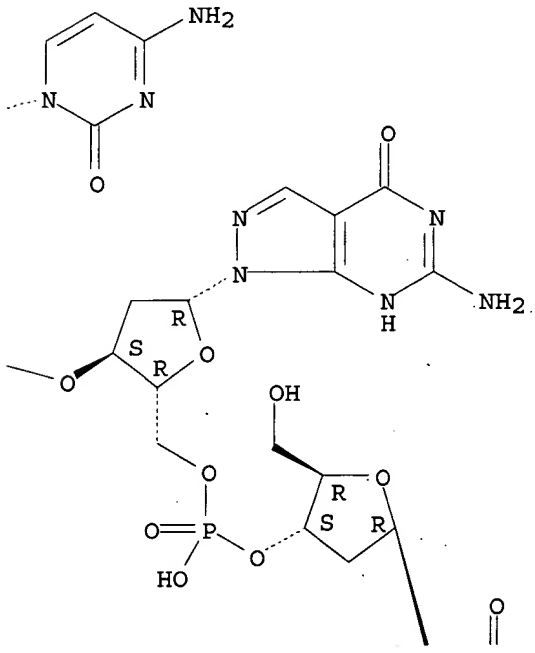
CN 8-Aza-7-deazaguanosine, 2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



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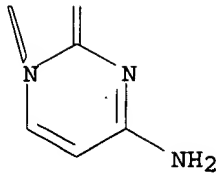
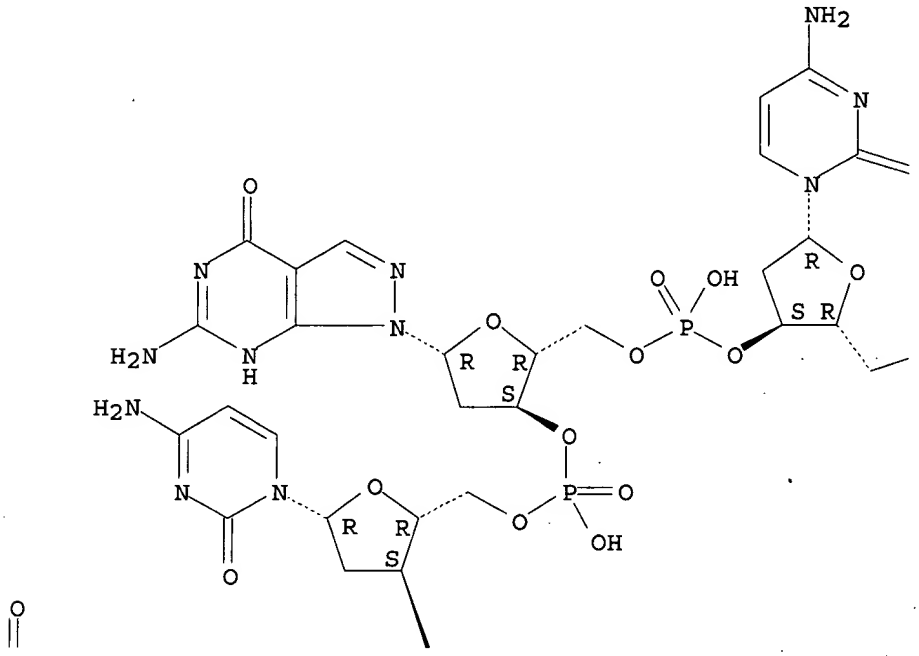
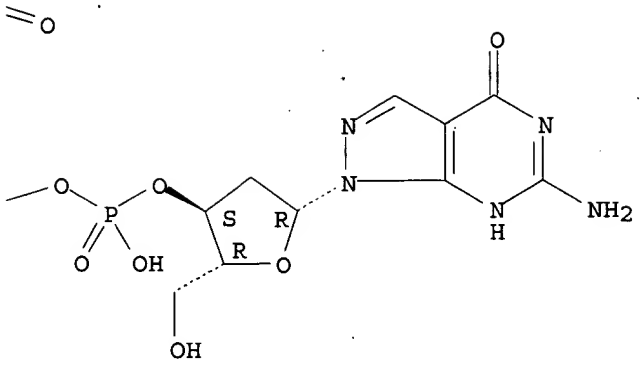


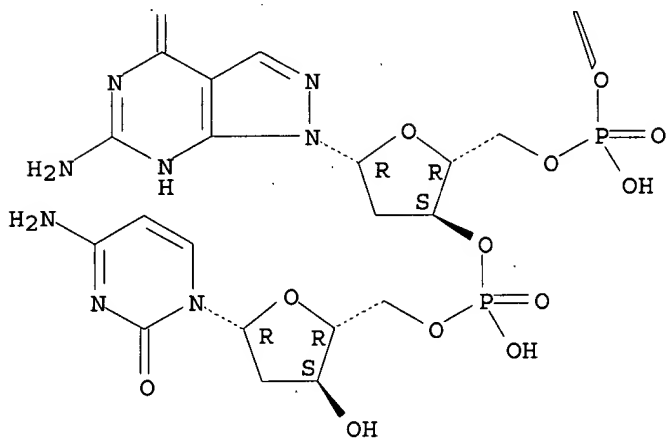
RN 121742-44-7 CAPLUS
CN Cytidine, 2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

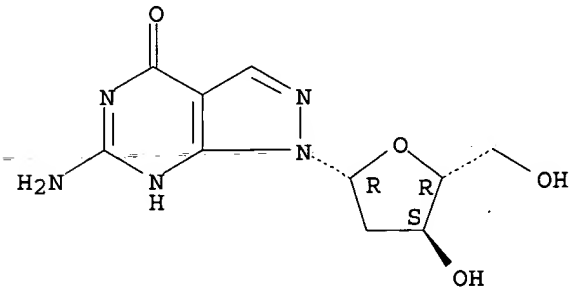






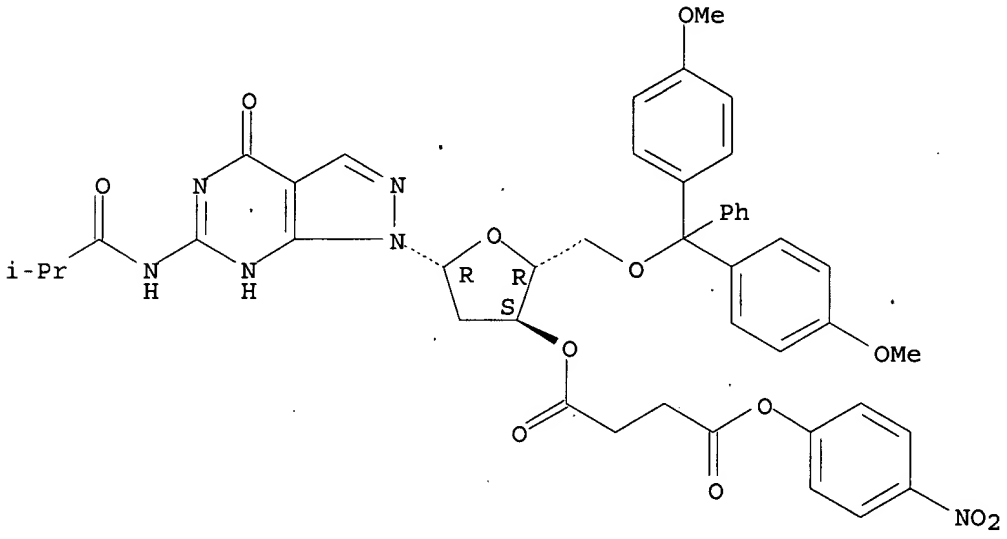
IT **100644-70-0DP**, hexanucleotides contg.
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 100644-70-0 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



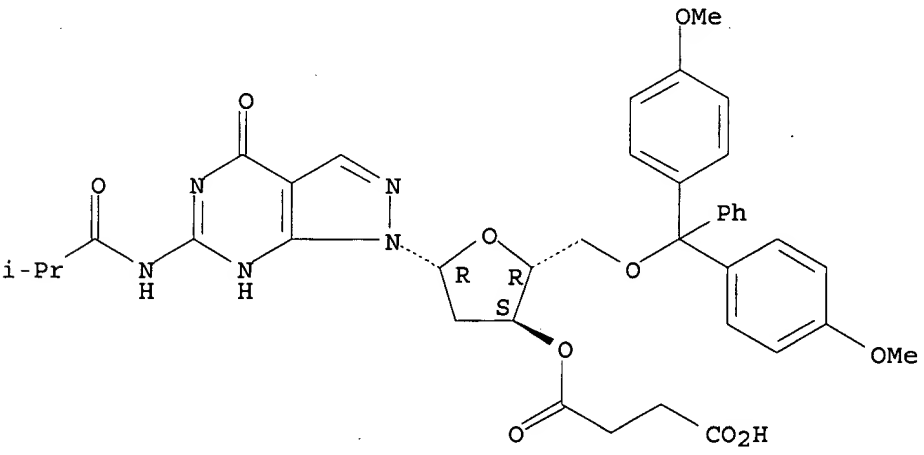
IT **121742-41-4P 121742-42-5DP**, fractosil-linked
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediate in synthesis of hexanucleotide)
RN 121742-41-4 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-3-O-[4-(4-nitrophenoxy)-1,4-dioxobutyl]-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



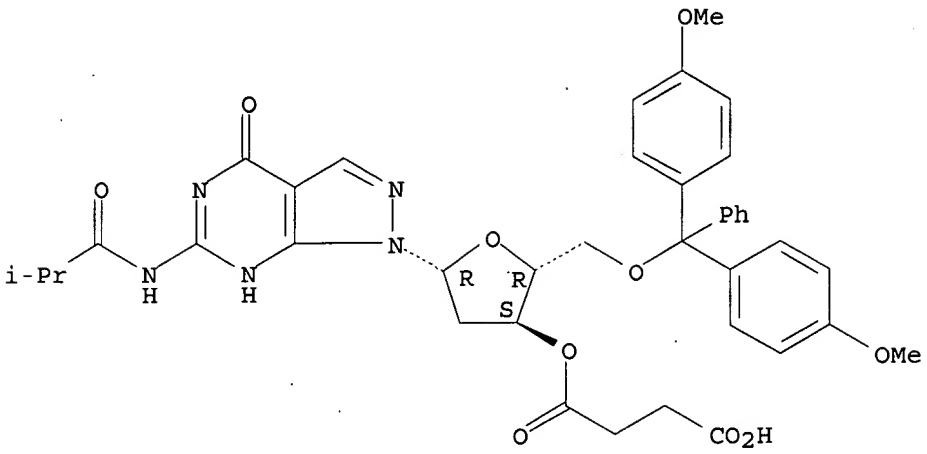
RN 121742-42-5 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-(3-carboxy-1-oxopropyl)-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



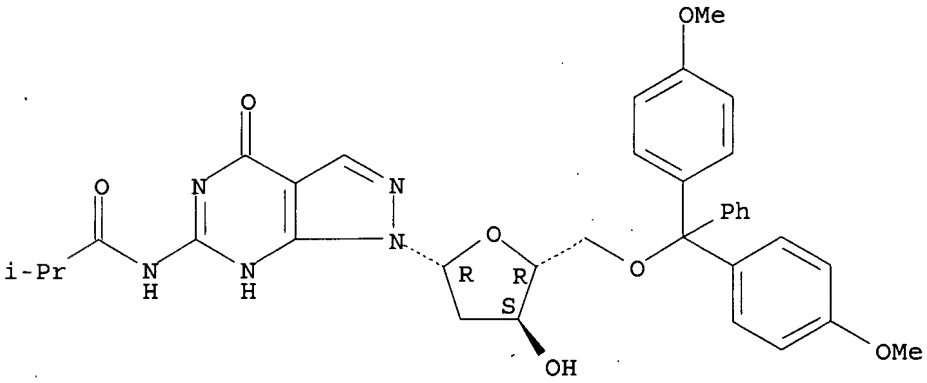
IT **121742-42-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrophenol)
RN 121742-42-5 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-(3-carboxy-1-oxopropyl)-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



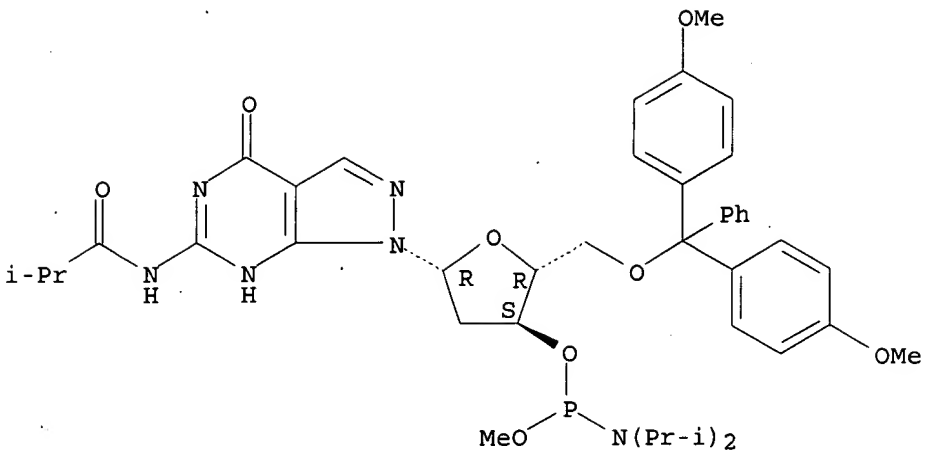
IT **118907-71-4**
RL: PROC (Process)
(succinylation of)
RN 118907-71-4 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



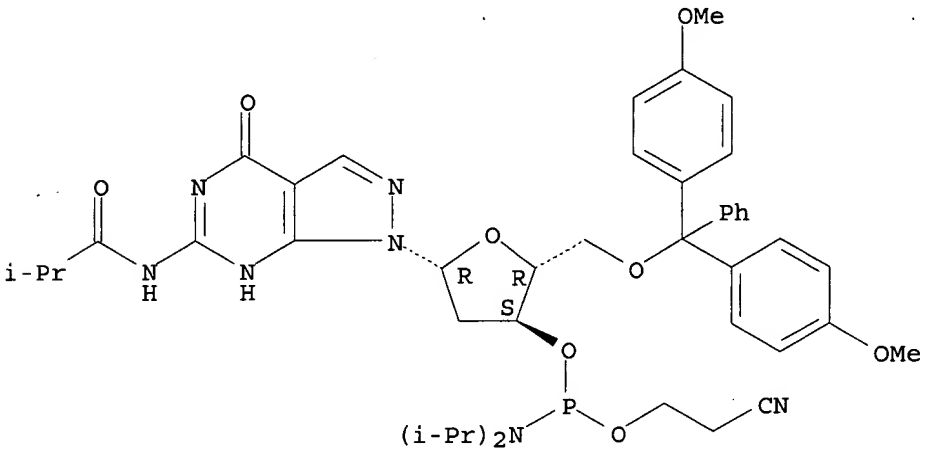
IT **118907-75-8 118907-76-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(use of, in synthesis of hexanucleotides)
RN 118907-75-8 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

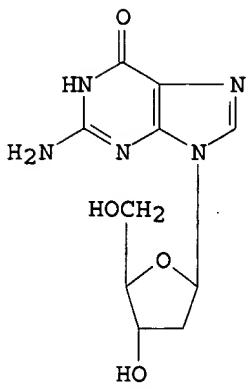


RN 118907-76-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:75966 CAPLUS
DOCUMENT NUMBER: 110:75966
TITLE: 8-Aza-7-deaza-2'-deoxyguanosine: **phosphoramidite** synthesis and properties of octanucleotides
AUTHOR(S): Seela, Frank; Driller, Hansjuergen
CORPORATE SOURCE: Lab. Org. Bioorgan. Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.
SOURCE: Helvetica Chimica Acta (1988), 71(5), 1191-8
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:75966
GI



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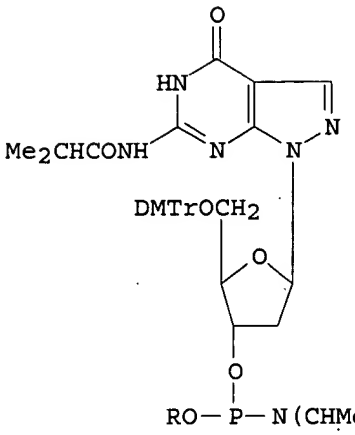


III

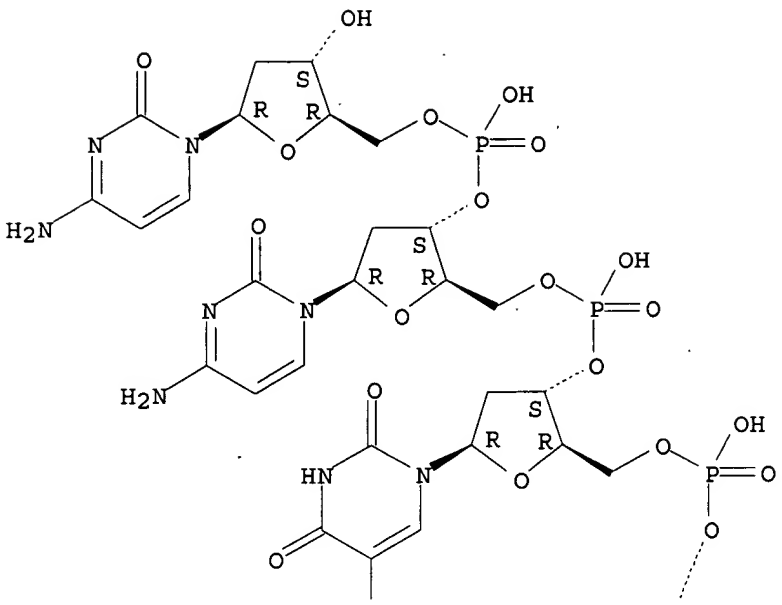
AB Base-modified octanucleotides derived from d(G1-G2-A-A-T-T-C-C) (I) but contg. 8-aza-7-deaza-2'-deoxyguanosine (II) instead of 2'-deoxyguanosine have been prepd. by solid-phase synthesis employing P(III) chem. Isobutyrylation of II, followed by 4,4'-dimethoxytritylation and subsequent phosphitylation yielded the Me or the cyanoethyl **phosphoramidites** III [R = Me, (CH2)2CN], resp. They were used as building blocks in automated DNA synthesis. The resulting octanucleotides contg. II showed increased Tm values compared to the parent oligomer I. The oligomers prepd. were employed as sequence-specific probes in endodeoxyribonuclease Eco RI oligonucleotide recognition. Whereas displacement of dG-2 (enzymic cleavage site of I) abolished phosphodiester hydrolysis, replacement of dG-1 enhanced the cleavage rate compared to I.

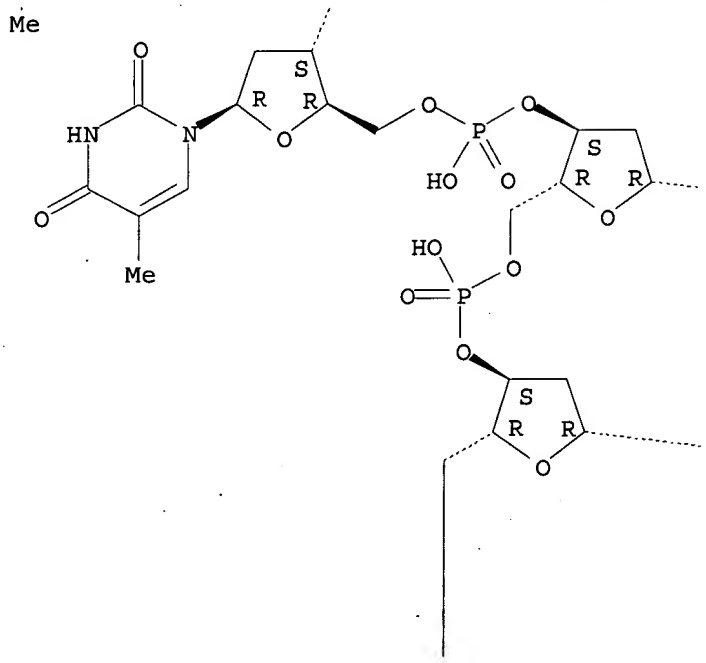
IT **118907-77-0P 118907-78-1P 118907-79-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deprotection of)

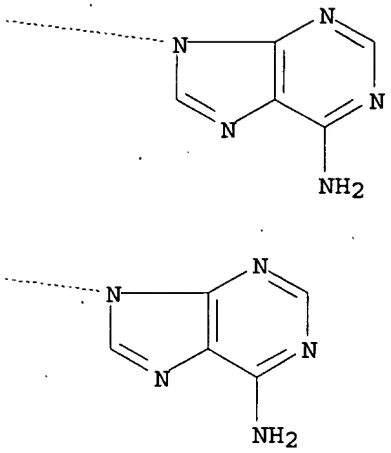
RN 118907-77-0 CAPLUS

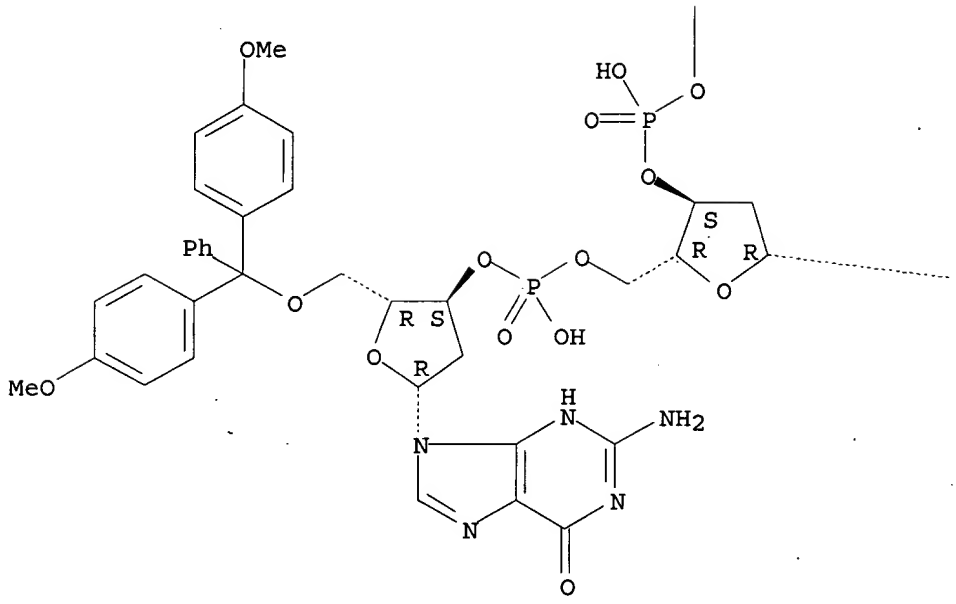
CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxyguanylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

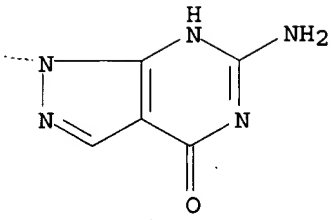
Absolute stereochemistry.





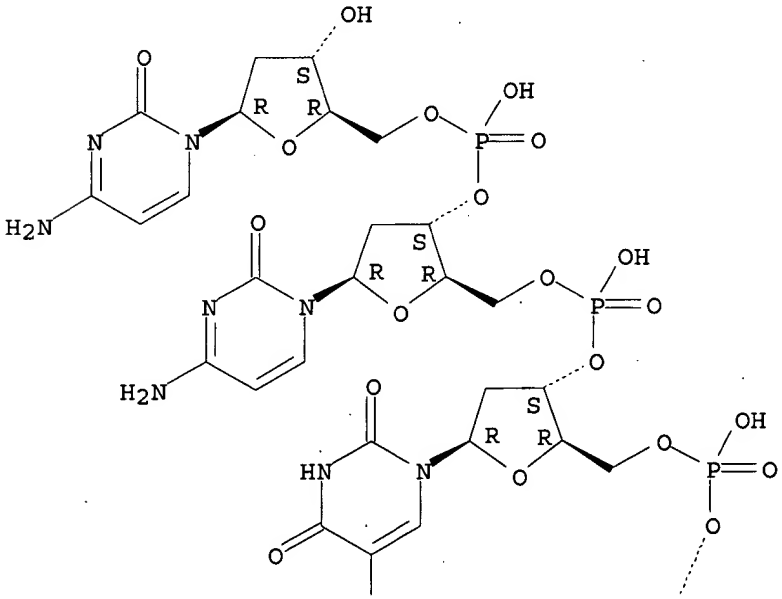




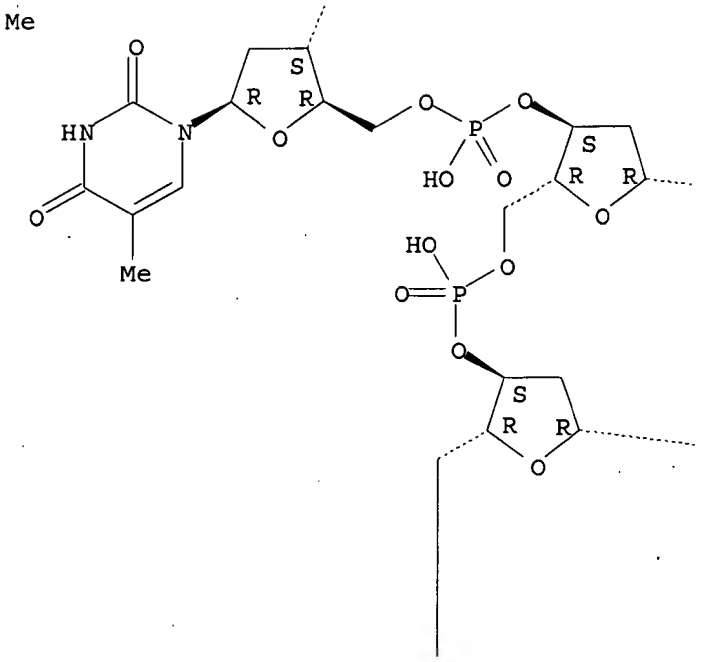


RN 118907-78-1 CAPLUS
CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

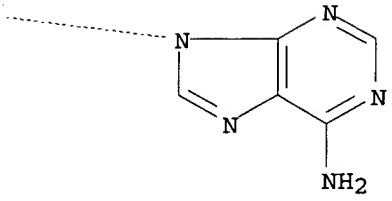
Absolute stereochemistry.

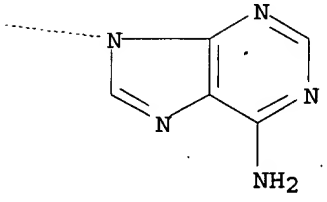


PAGE 2-A

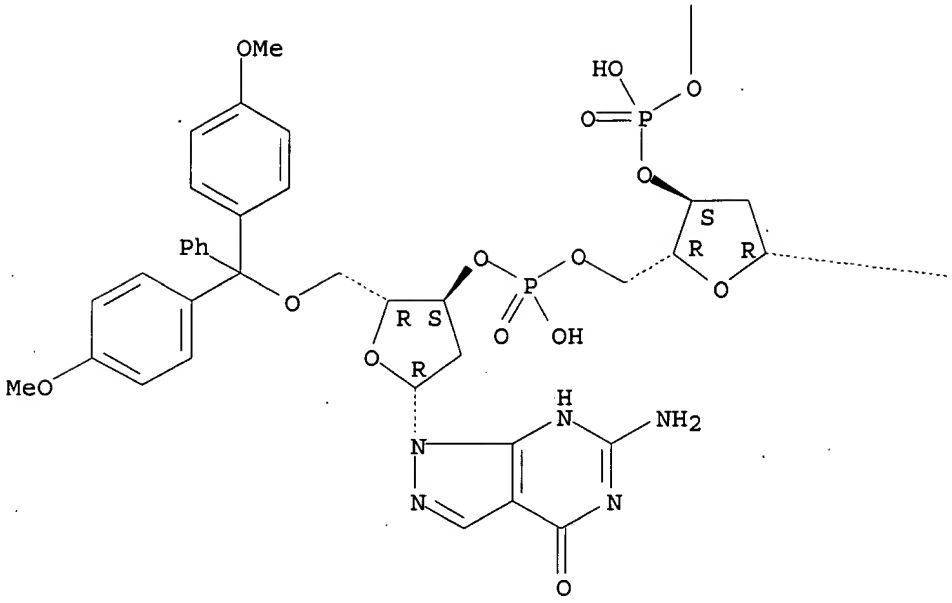


PAGE 2-B

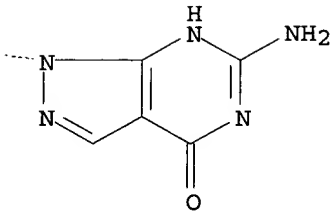




PAGE 3-A

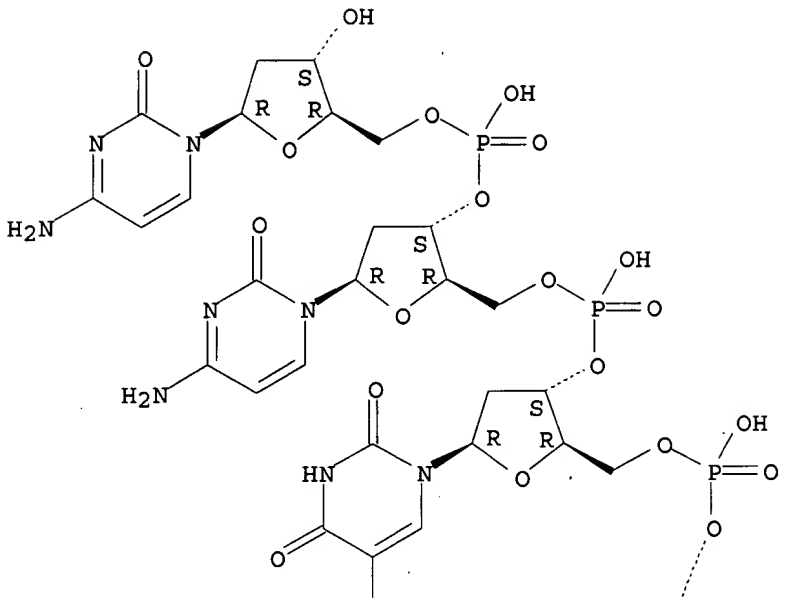


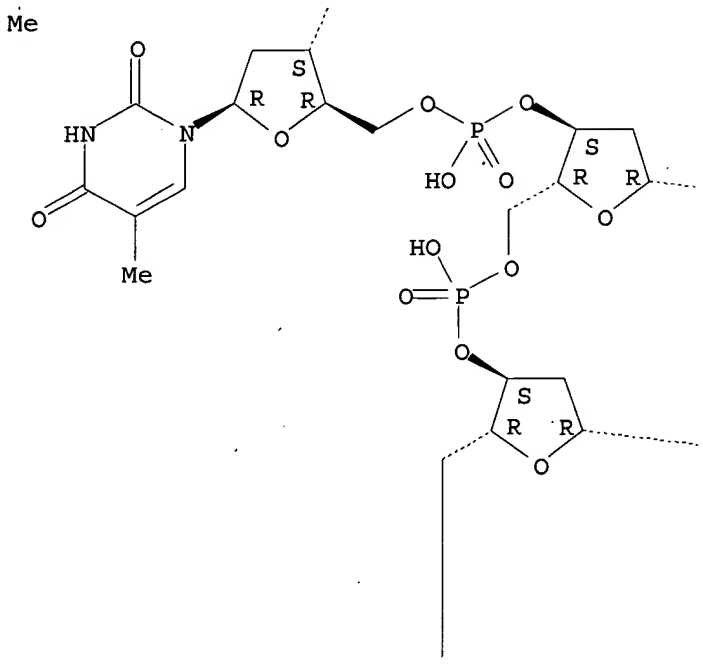
PAGE 3-B

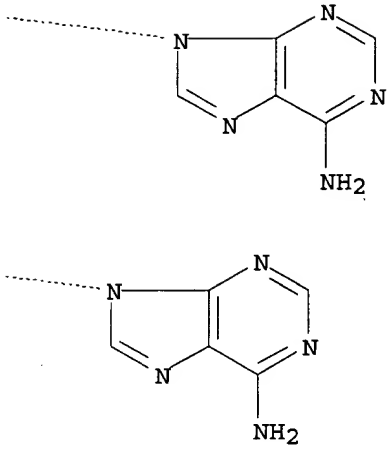


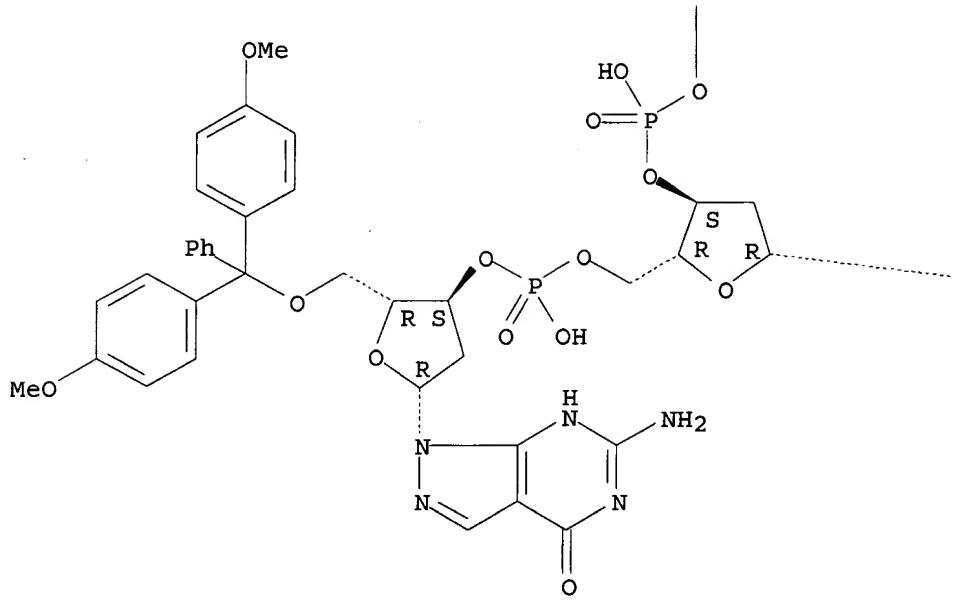
RN 118907-79-2 CAPLUS
CN Cytidine, 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.





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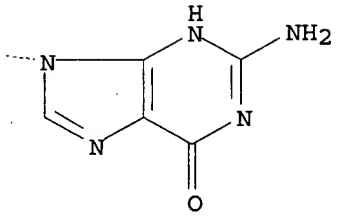
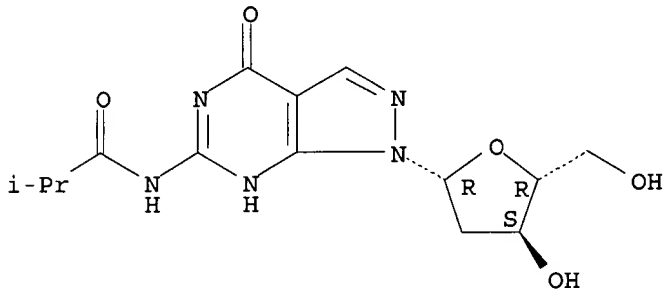


IT **118907-70-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and dimethyltritylation of, in synthesis of octanucleotides)
RN 118907-70-3 CAPLUS
CN Propanamide, N-[1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

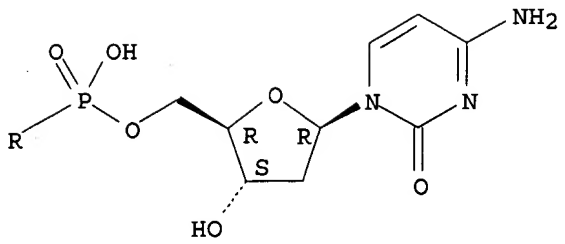
Absolute stereochemistry.

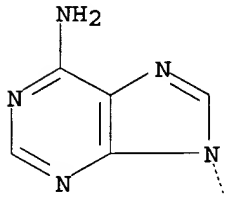


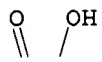
IT **118907-80-5P 118907-81-6P 118907-82-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and enzymic hydrolysis of)
RN 118907-80-5 CAPLUS
CN Cytidine, 2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

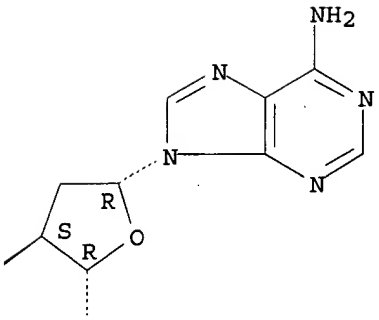
PAGE 1-A







PAGE 1-B



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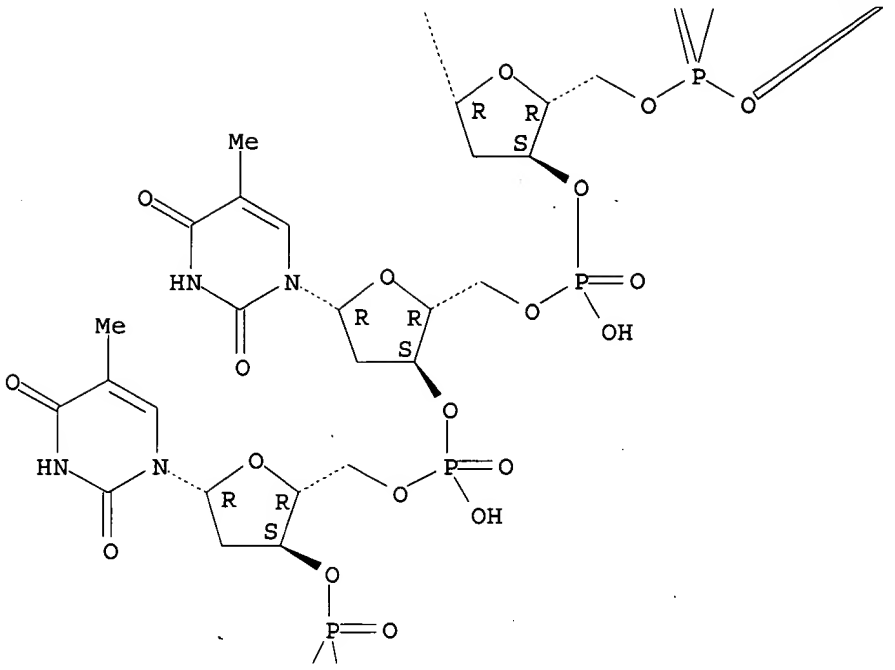

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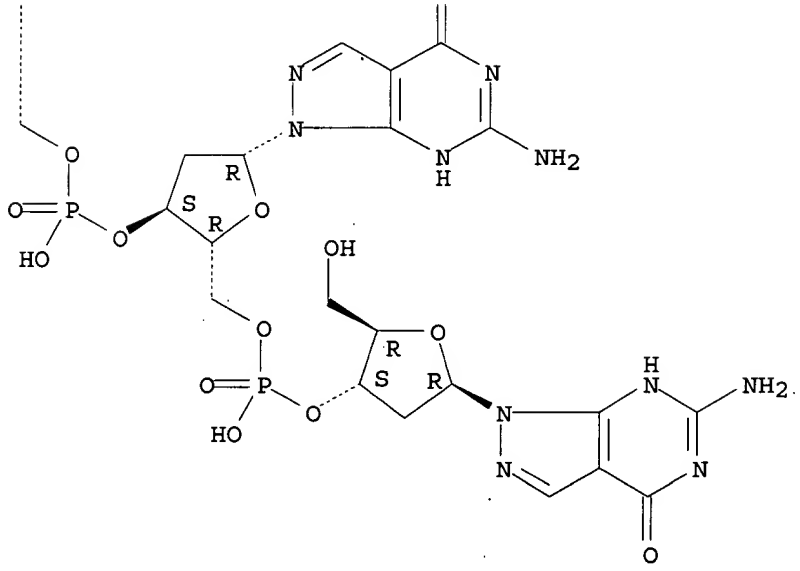

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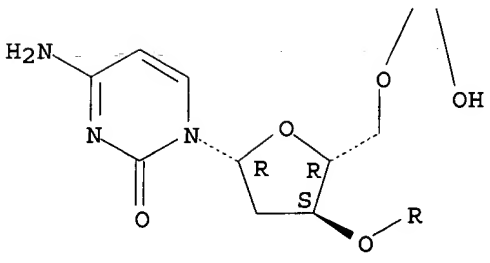
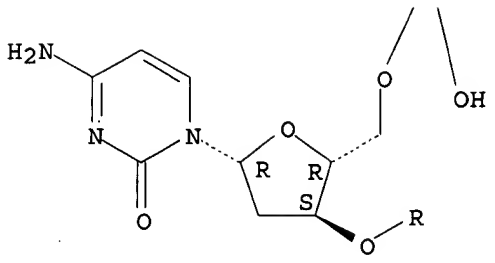
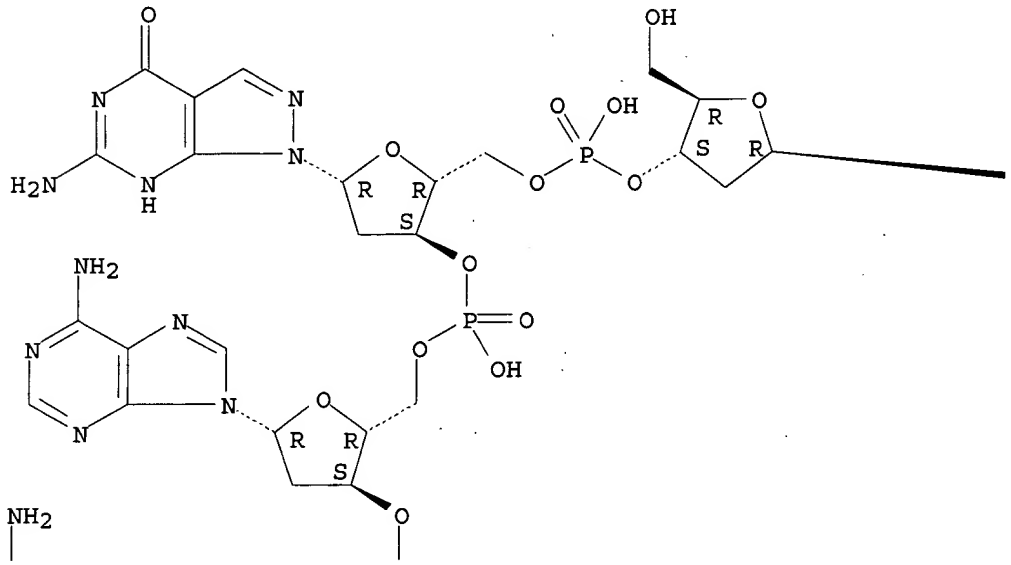
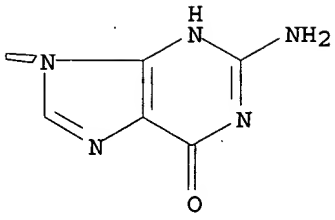


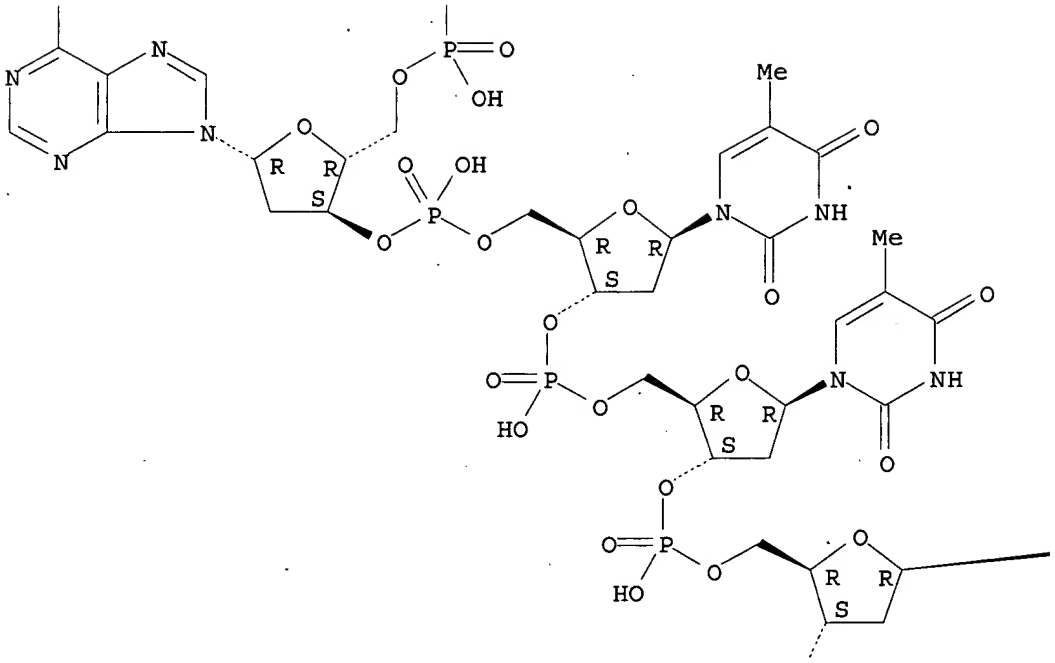


RN 118907-81-6 CAPLUS
CN Cytidine, 2'-deoxyguanylyl-(3'.fwdarw.5')-2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.







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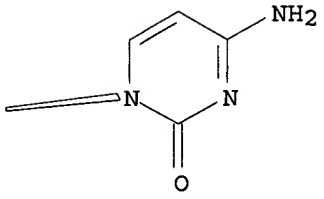

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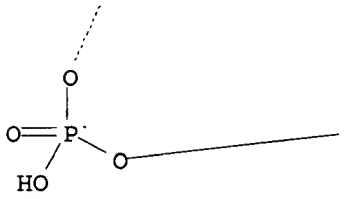

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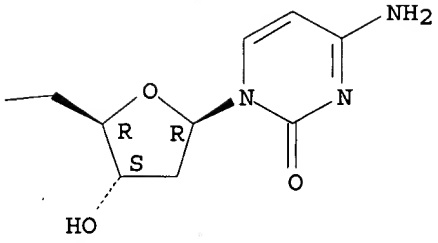
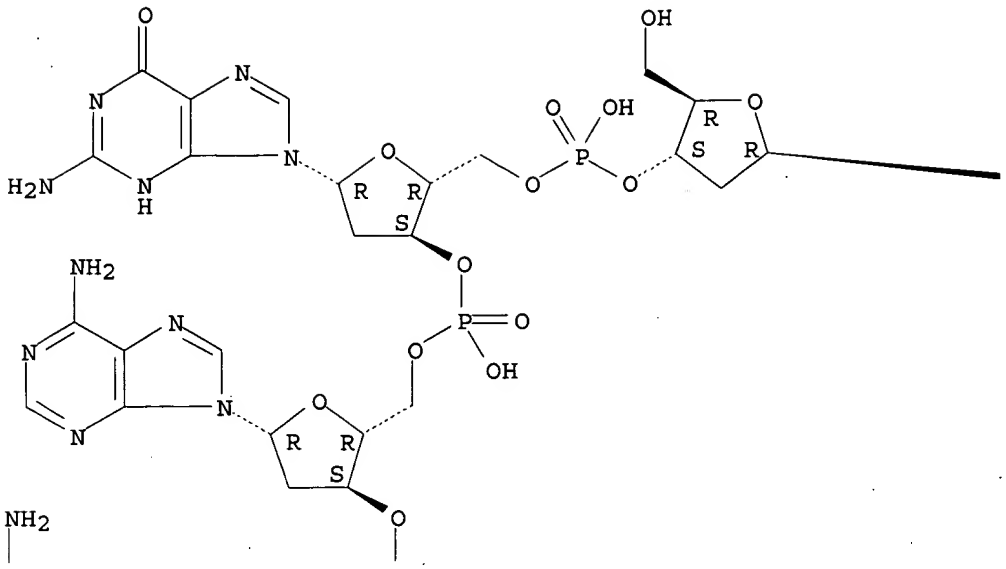


RN 118907-82-7 CAPLUS
CN Cytidine, 2'-deoxy-8-aza-7-deazaguanylyl-(3'.fwdarw.5')-2'-deoxyguanylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-2'-deoxyadenylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-thymidylyl-(3'.fwdarw.5')-2'-deoxycytidylyl-(3'.fwdarw.5')-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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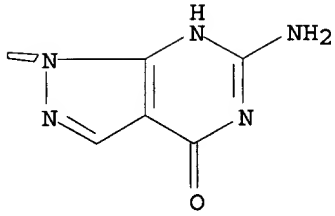

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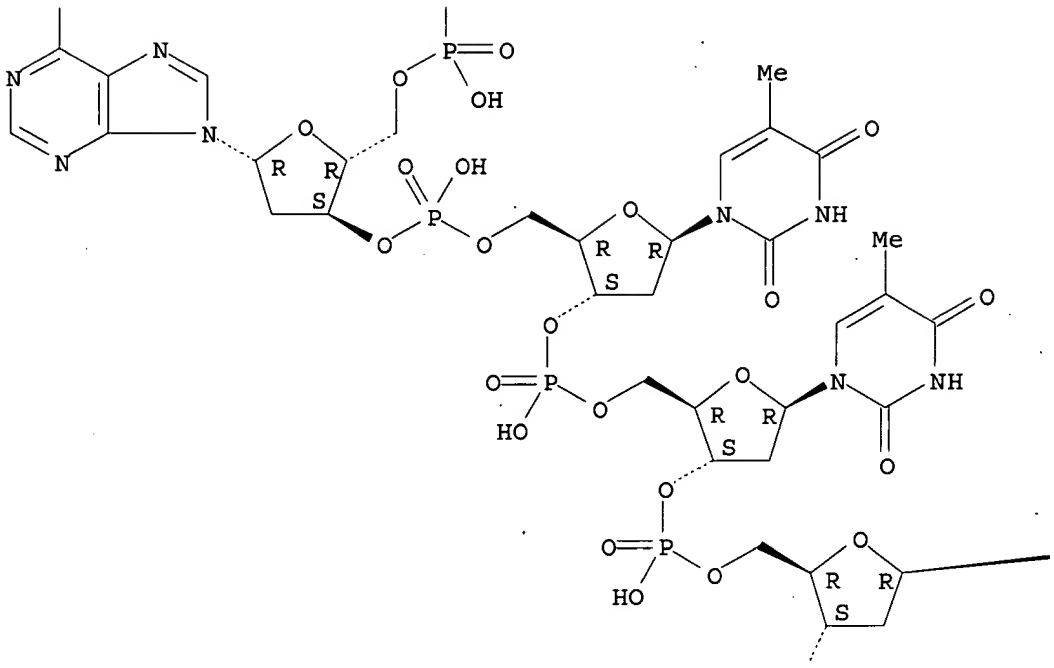

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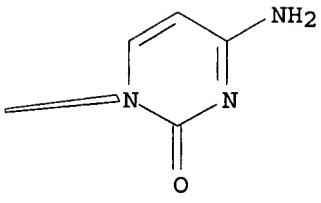

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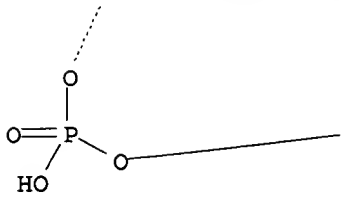

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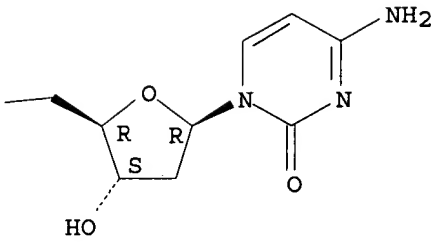
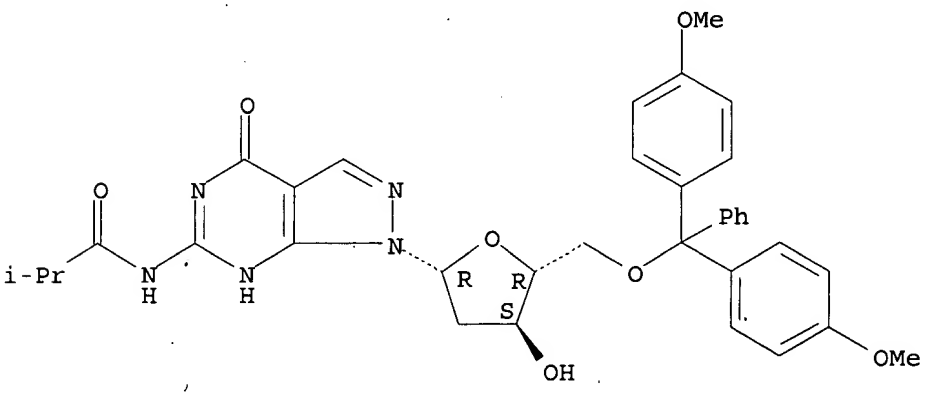


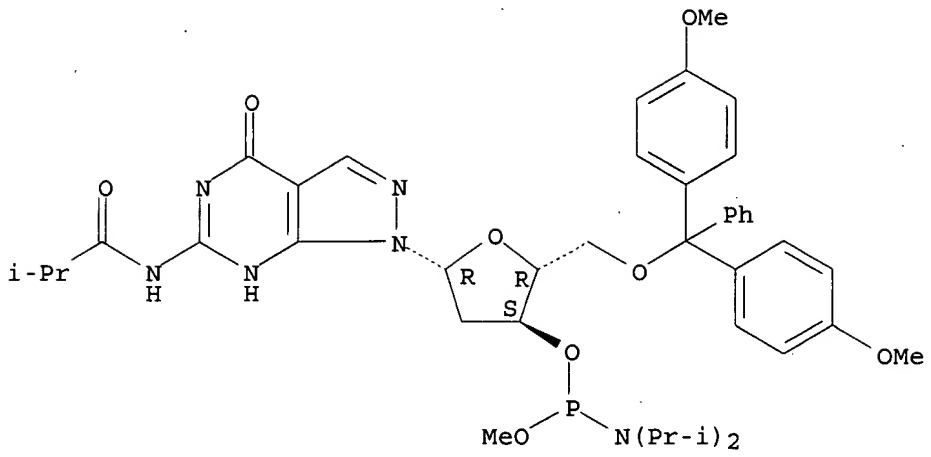
IT **118907-71-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and phosphatidylation of, in synthesis of octanucleotides)
RN 118907-71-4 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



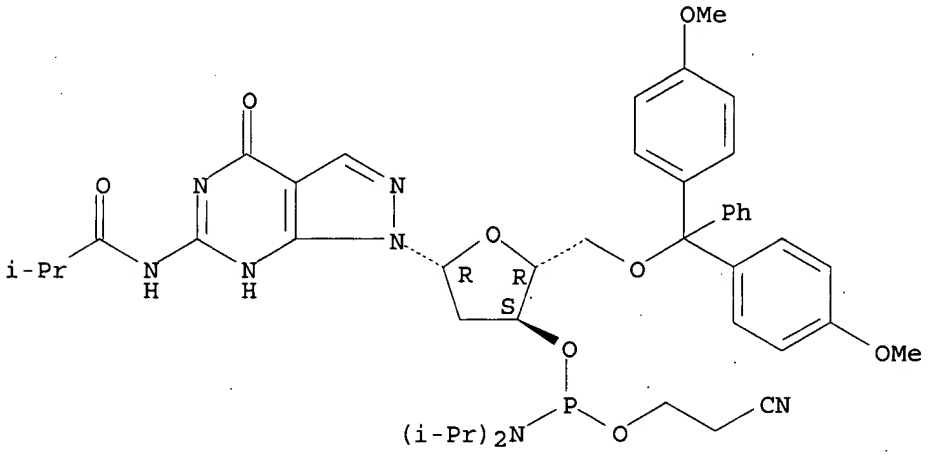
IT **118907-75-8P 118907-76-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, intermediate in synthesis of octanucleotides)
RN 118907-75-8 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



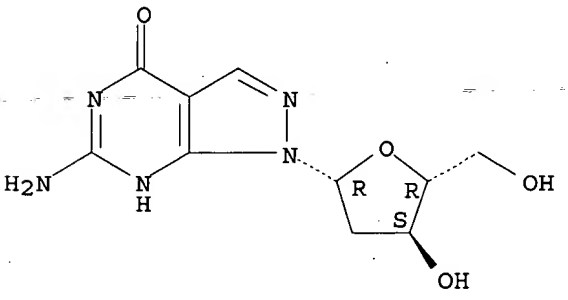
RN 118907-76-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

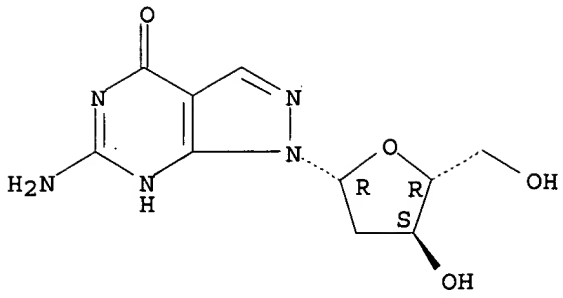
Absolute stereochemistry.



IT **100644-70-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(N-isobutylation of, in synthesis of octanucleotides)
RN 100644-70-0 CAPLUS
CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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d his

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L3            102 S L1 SSS FULL

     FILE 'CAPLUS, MEDLINE' ENTERED AT 14:59:56 ON 19 AUG 2003
L4             47 S L3
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L6              3 S L3 AND PHOSPHORAMIDITE
L7              3 DUP REM L6 (0 DUPLICATES REMOVED)
L8              3 S L3 AND PHOSPHORAMIDITES
L9             30 S L3 AND NUCLEOSIDE
L10             5 S L9 AND PHOSP?
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L21 ANSWER 1 OF 4 USPATFULL on STN

ACCESSION NUMBER:	2003:113672 USPATFULL
TITLE:	Process for the synthesis of pyrazolopyrimidines
INVENTOR(S):	Dempcy, Robert O., Kirkland, WA, UNITED STATES Adams, A. David, Snohomish, WA, UNITED STATES Reed, Michael W., Seattle, WA, UNITED STATES
PATENT ASSIGNEE(S):	Epoch Biosciences, Inc., Bothell, WA (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003078413	A1	20030424	
APPLICATION INFO.:	US 2001-954624	A1	20010912	(9)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	APPLICATION			
LEGAL REPRESENTATIVE:	TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834			
NUMBER OF CLAIMS:	43			
EXEMPLARY CLAIM:	1			
LINE COUNT:	1015			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a nucleoside comprising a pyrazolopyrimidine base and a process for producing the same. In particular, the processes of the present invention comprises using a halogenated pyrazolopyrimidine base and removing the halogen after the base is coupled to a sugar moiety. The presence of the halogen on the nucleoside base allows facile and economical production of a large quantity of nucleosides.

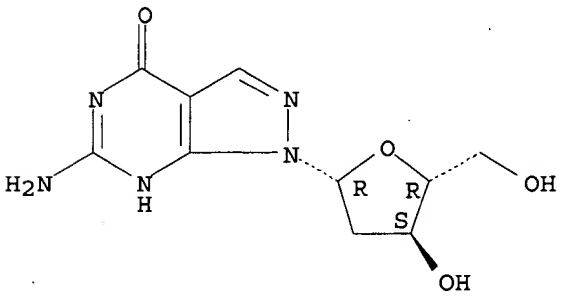
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **100644-70-0P**
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)

RN 100644-70-0 USPATFULL

CN 4H-Pyrazolo[3,4-d]pyrimidin-4-one, 6-amino-1-(2-deoxy-.beta.-D-erythro-pentofuranosyl)-1,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L23 ANSWER 2 OF 5 CA COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 139:53258 CA
TITLE: Solid phase synthesis and combinatorial libraries of deazapurine **nucleosides** useful in the treatment of viral infections and neoplastic diseases
INVENTOR(S): Girardet, Jean-Luc; An, Haoyun; Chamakura, Varaprasad; Gunic, Esmir; Hong, Zhi
PATENT ASSIGNEE(S): Ribapharm Inc., USA
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003051899	A1	20030626	WO 2002-US40416	20021217

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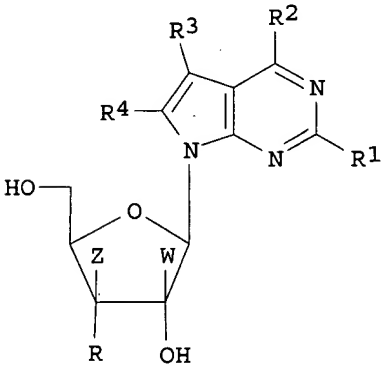
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-342410P P 20011217
OTHER SOURCE(S): MARPAT 139:53258
GI



I

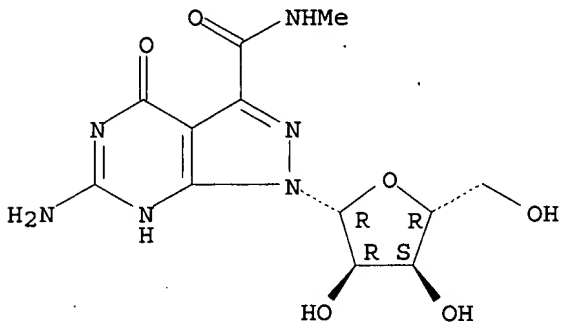
AB Deazapurine **nucleoside** analogs I, wherein R is H, OH; R1-R4 are independently H, **halogen**, NH2, NHR', R', CN, CONH2, N3, CH2CN; R' is substituted alkyl, unsubstituted alkyl, substituted aryl, and an unsubstituted aryl; W and Z are independently hydrogen, N3, NH2, OH, SH, R5, or NHR5 wherein R5 is an alkyl, substituted alkyl, alkenyl, a substituted alkenyl, alkynyl, substituted alkynyl, aryl, substituted aryl; are prepd. in a combinatorial library approach. Particularly preferred compds. and libraries include various 7-deazapurines, 9-deazapurines, and 7-deaza-8-azaguanosine as heterocyclic bases, and it is generally preferred that such **nucleosides** include a ribofuranose as the sugar moiety. It is further contemplated that compds. generated using

contemplated libraries may be useful in the treatment of various conditions, particularly viral infections and neoplastic diseases (no data). Thus, I (R = OH; R1 = R4 = Z = W = H; R2 = NHBn; R3 = Ph) was prepd. useful in the treatment of viral infections and neoplastic diseases.

IT **547754-42-7P**
RL: CPN (Combinatorial preparation); CMBI (Combinatorial study); PREP (Preparation)
(solid phase synthesis and combinatorial libraries of deazapurine **nucleosides** useful in treatment of viral infections and neoplastic diseases)

RN 547754-42-7 CA
CN INDEX NAME NOT YET ASSIGNED

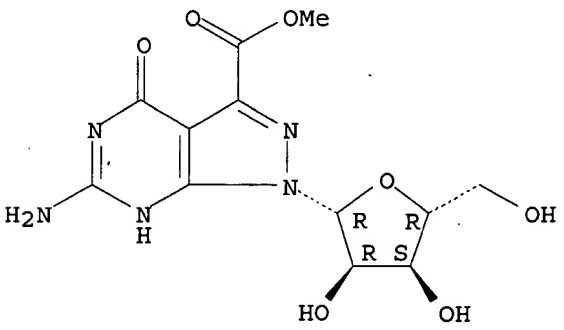
Absolute stereochemistry.



IT **547754-41-6DP**, 4-methoxytrityl resin support **547754-42-7DP**, 4-methoxytrityl resin support
RL: CPN (Combinatorial preparation); CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); PREP (Preparation); RACT (Reactant or reagent)
(solid phase synthesis and combinatorial libraries of deazapurine **nucleosides** useful in treatment of viral infections and neoplastic diseases)

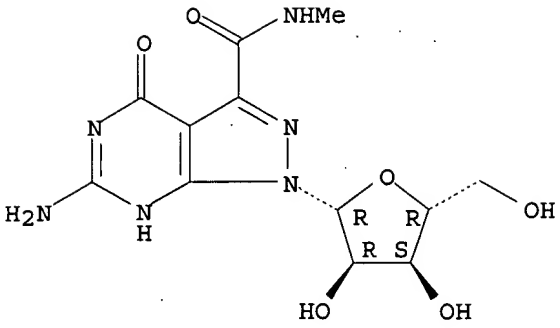
RN 547754-41-6 CA
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



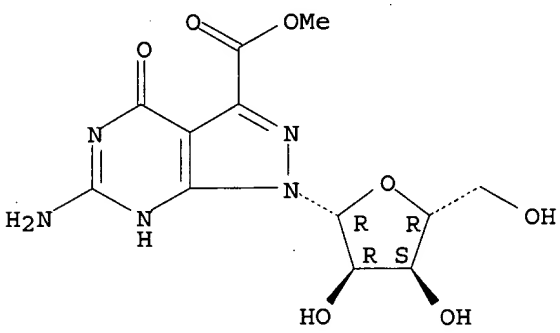
RN 547754-42-7 CA
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



IT **547754-41-6**
RL: CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); RACT (Reactant or reagent)
(solid phase synthesis and combinatorial libraries of deazapurine **nucleosides** useful in treatment of viral infections and neoplastic diseases)
RN 547754-41-6 CA
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

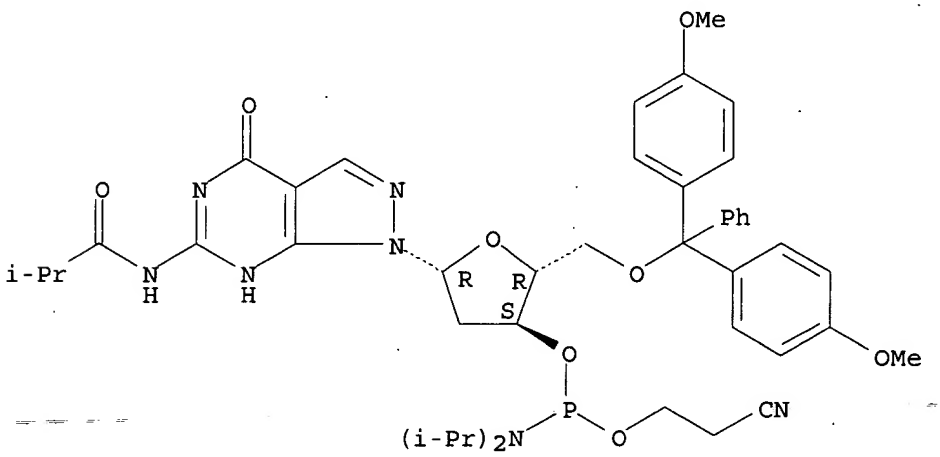
ANSWER 1 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:693428 CAPLUS
DOCUMENT NUMBER: 132:64475
TITLE: Oligonucleotides containing pyrazolo[3,4-d]pyrimidines: the influence of 7-substituted 8-aza-7-deaza-2'-deoxyguanosines on the duplex structure and stability
AUTHOR(S): Seela, Frank; Becher, Georg
CORPORATE SOURCE: Laboratorium fur Organische und Bioorganische Chemie, Institut fur Chemie, Universitat Osnabruck, Osnabruck, D-49069, Germany
SOURCE: Helvetica Chimica Acta (1999), 82(10), 1640-1655
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Oligonucleotides contg. 7-substituted 8-aza-7-deazaguanines (= 6-amino-1,5-dihydro-4H-pyrazolo[3,4-d]pyrimidin-4-ones) were prepd. by automated solid-phase synthesis. A series of 7-alkynylated 8-aza-7-deaza-2'-deoxyguanosines were synthesized with the 7-iodonucleoside as starting material and by the Pd0/Cu1-catalyzed cross-coupling reaction with various alkynes. Phosphoramidites were prepd. from the 7-substituted 8-aza-7-deaza-2'-deoxyguanosine derivs. carrying halogeno, cyano, and hexynyl substituents. From the melting profiles of oligonucleotide duplexes, the Tm values as well as the thermodn. data were detd. A significant duplex stabilization by the 7-substituents was obsd. for the DNA .cntdot. DNA duplexes, but not in the case of DNA .cntdot. RNA hybrids.

IT **118907-76-9P 183274-65-9P 183274-66-0P 252761-79-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of oligonucleotides contg. pyrazolo[3,4-d]pyrimidines and the influence of substituted deazadeoxyguanosines on the duplex structure and stability)

RN 118907-76-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

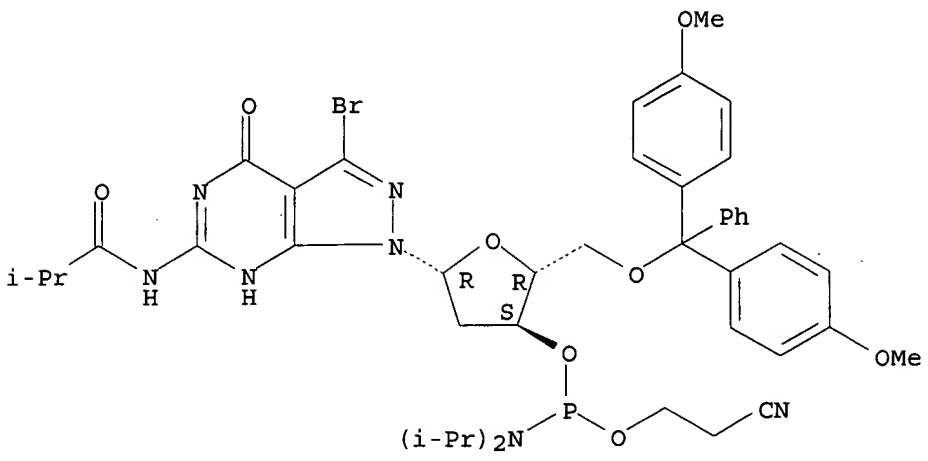
Absolute stereochemistry.



RN 183274-65-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-3-bromo-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-

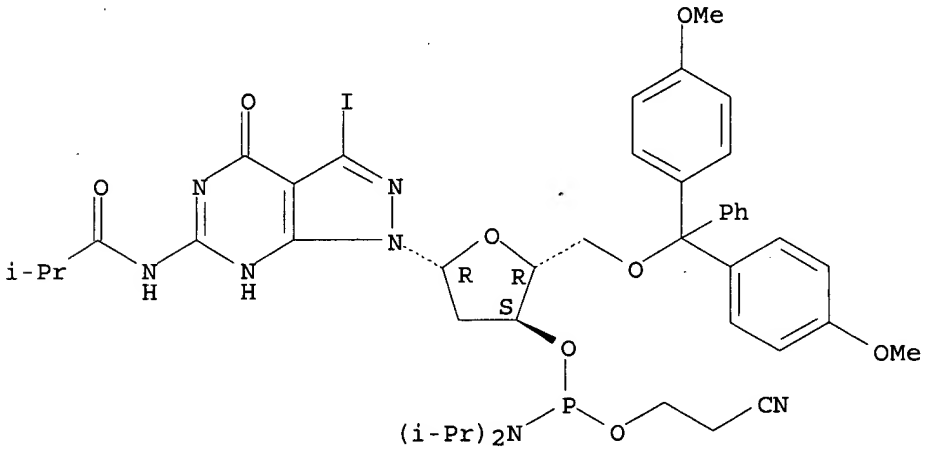
yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



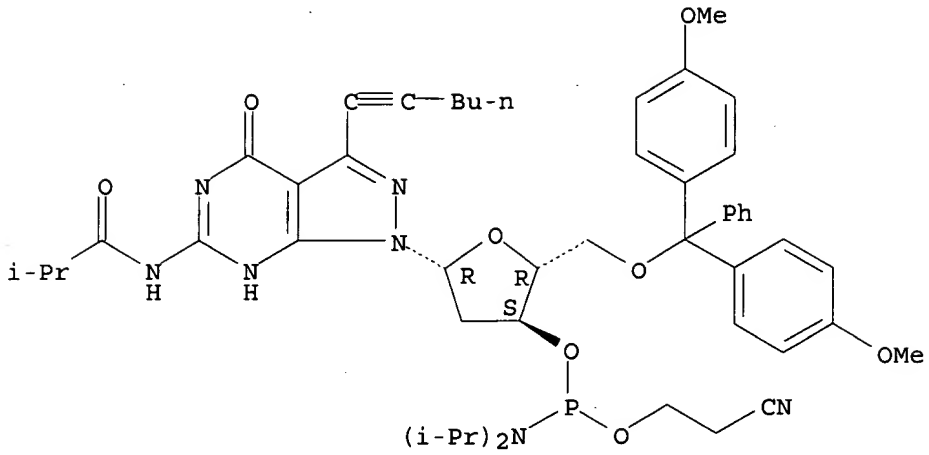
RN 183274-66-0 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-3-iodo-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 252761-79-8 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-3-(1-hexynyl)-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

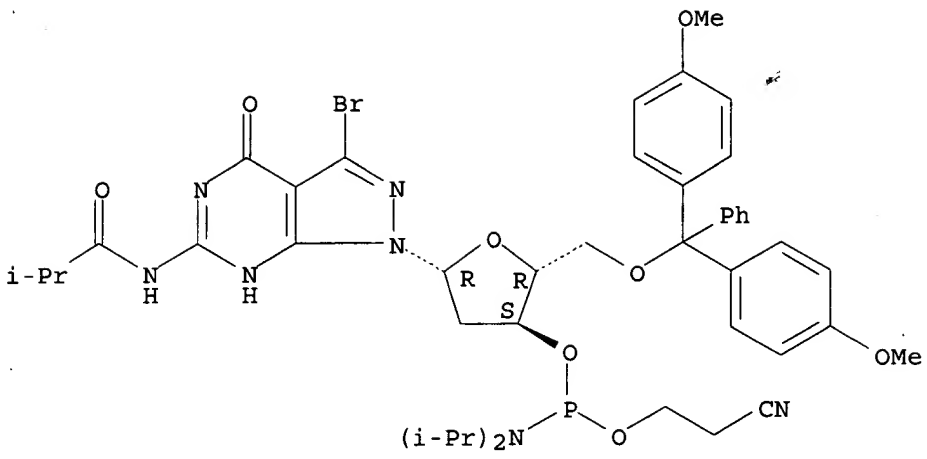
L16 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:599079 CAPLUS
DOCUMENT NUMBER: 129:330959
TITLE: Stabilization of duplex DNA by 7-halogenated 8-aza-7-deazaguanines
AUTHOR(S): Seela, Frank; Becher, Georg
CORPORATE SOURCE: Institut fur Chemie, Laboratorium fur Organische und Bioorganische Chemie, Universitat Osnabruck, Osnabruck, D-49069, Germany
SOURCE: Chemical Communications (Cambridge) (1998), (18), 2017-2018
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Oligonucleotides contg. 7-halogenated 8-aza-7-deaza-2'-deoxyguanosine (c7z8Gd) derivs. such as d(Br7c7z8 G-C)4 8 (Tm = 88 .degree.C) and d(I7c7z8 G-C)4 9 (Tm = 84 .degree.C) are significantly more stable than d(G-C)4 5 (Tm = 59 .degree.C).

IT **183274-65-9P 183274-66-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(stabilization of duplex DNA by halogenated 8-aza-7-deaza-2-deoxyguanosines)

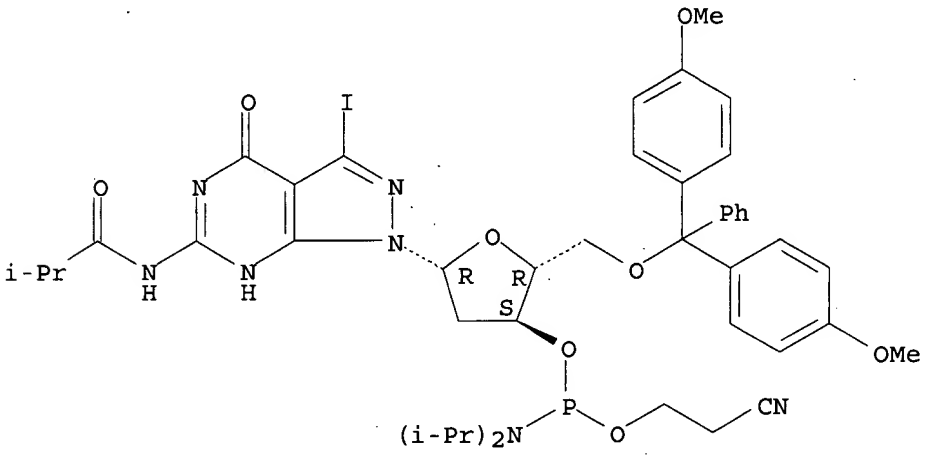
RN 183274-65-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-3-bromo-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



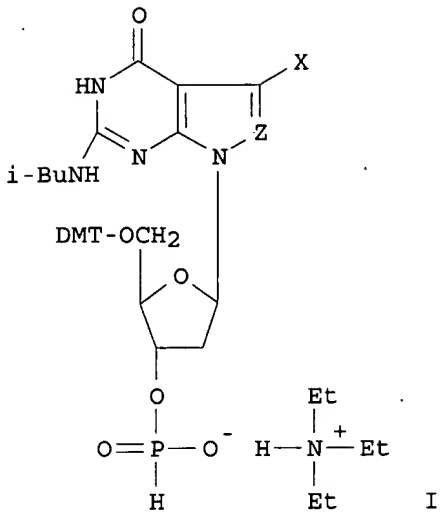
RN 183274-66-0 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-3-iodo-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:600970 CAPLUS
DOCUMENT NUMBER: 125:329249
TITLE: 7-Deazapurine DNA: oligonucleotides containing 7-substituted 7-deaza-2'-deoxyguanosine and 8-aza-7-deaza-2'-deoxyguanosine
AUTHOR(S): Seela, Frank; Ramzaeva, Natalya; Becher, Georg
CORPORATE SOURCE: Institut Chemie, Universitaet Osnabrueck, Osnabrueck, D-49069, Germany
SOURCE: Collection of Czechoslovak Chemical Communications (1996), 61(Spec. Issue), S258-S261
CODEN: CCCCAK; ISSN: 0010-0765
PUBLISHER: Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

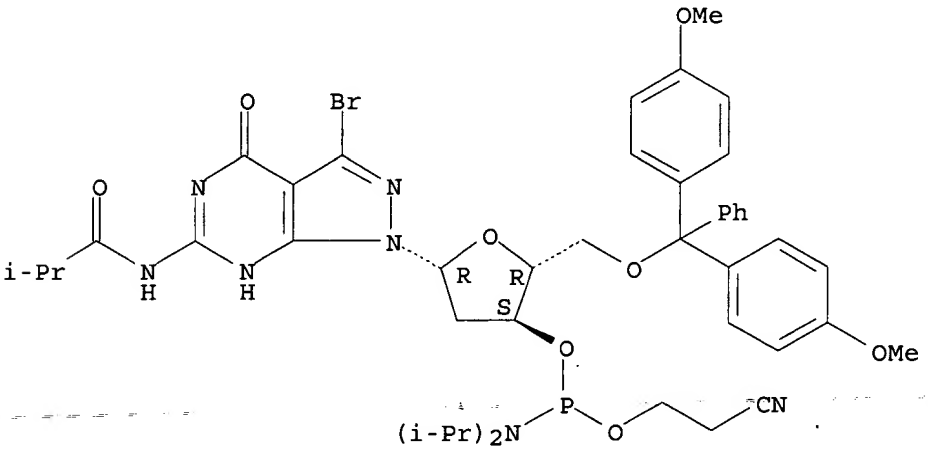
AB The synthesis of 7-halo substituted 7-deaza- and 8-aza-7-deaza-2'-deoxyguanosines, their incorporation into oligonucleotides, and the stability of corresponding duplexes were described. For example, the nucleoside analogs I (Z = carbon, nitrogen; X = bromo, iodo) were incorporated into oligonucleoside analogs.

IT **183274-65-9P 183274-66-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of deazadeoxyguanosine and azadeazadeoxyguanosine-contg. oligonucleotides)

RN 183274-65-9 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-3-bromo-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

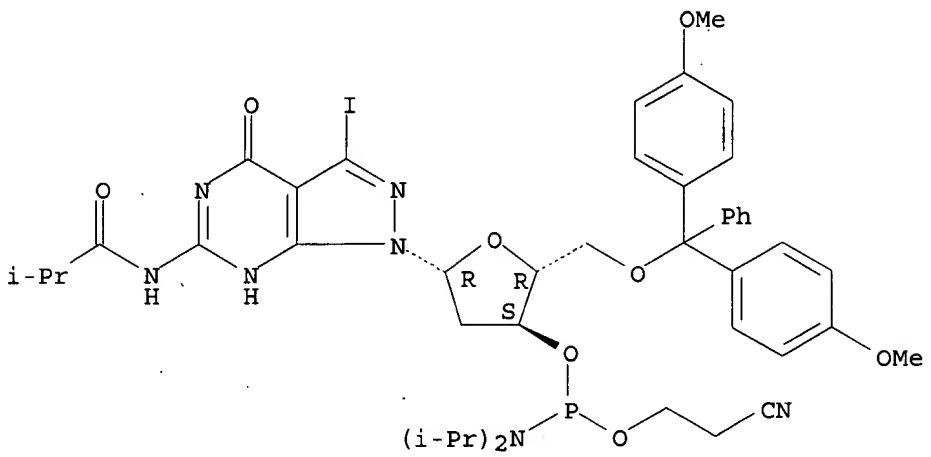


RN 183274-66-0 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-3-iodo-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-

2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d l16 4-6 ibib abs hitstr

L16 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:119293 CAPLUS
DOCUMENT NUMBER: 112:119293
TITLE: Pyrazolo[3,4-d]pyrimidine 2'-deoxyribo- and 2',3'-dideoxyribofuranosides: synthesis and application to oligonucleotide chemistry
AUTHOR(S): Seela, F.; Driller, H.; Kaiser, K.; Rosemeyer, H.; Steker, H.
CORPORATE SOURCE: Lab. Org. Bioorg. Chem., Univ. Osnabrueck, Fed. Rep. Ger.
SOURCE: Nucleosides & Nucleotides (1989), Volume Date 1988, 8(5-6), 789-92
CODEN: NUNUD5; ISSN: 0732-8311
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:119293
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A symposium communication on the synthesis of pyrazolopyrimidine deoxyribonucleosides, e.g., I (R = NH2, H; R1 = H, NH2) and II (R2 = H, NH2), is described employing either liq.-liq. or solid-liq. phase-transfer glycosylation. From I (R = NH2, R1 = H) and II (R2= NH2), the phosphoramidates III (R3 = Me, CH2CH2CN, DMT = dimethoxytrityl) and IV were prepd. They were used in automated solid-phase synthesis of 10 oligonucleotides. Deoxygenation of I (R = NH2, R1 = H) and II (R2 = NH2) yielded pyrazolopyrimidine 2',3'-dideoxynucleosides isosteric to ddA, ddG, and ddI.

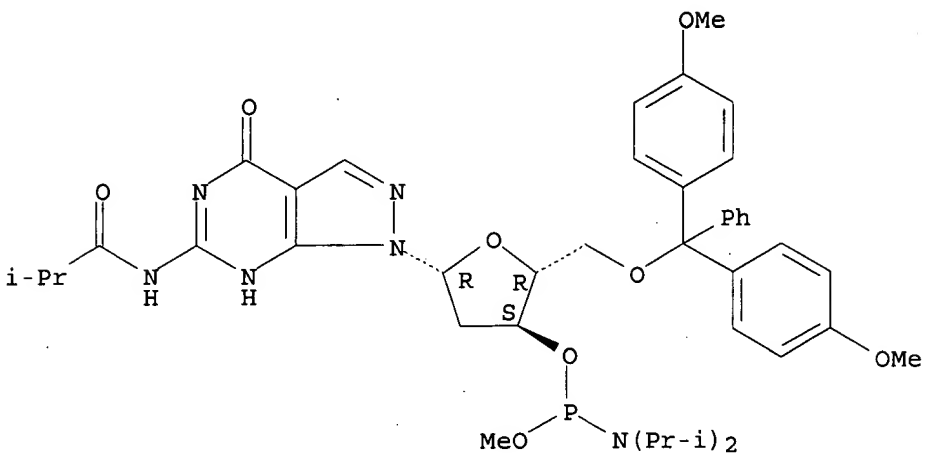
IT **118907-75-8P 118907-76-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for synthesis of oligonucleotides)

RN 118907-75-8 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-

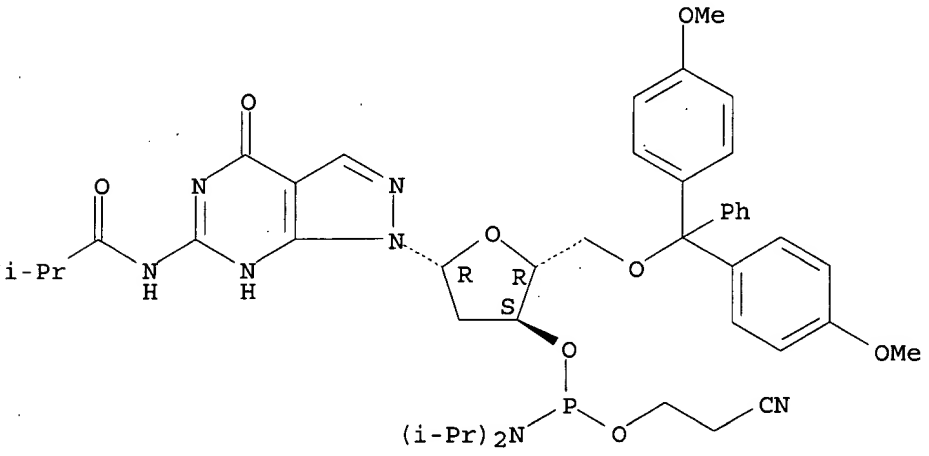
pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

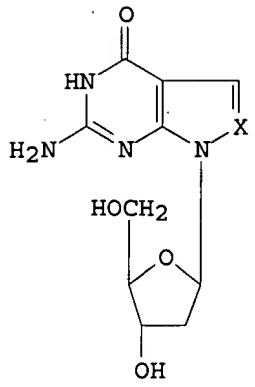


RN 118907-76-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L16 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:458263 CAPLUS
DOCUMENT NUMBER: 111:58263
TITLE: Alternating d(G-C)3 and d(C-G)3 hexanucleotides containing 7-deaza-2'-deoxyguanosine or 8-aza-7-deaza-2'-deoxyguanosine in place of dG
AUTHOR(S): Seela, Frank; Driller, Hansjuergen
CORPORATE SOURCE: Fachber. Biol./Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.
SOURCE: Nucleic Acids Research (1989), 17(3), 901-10
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

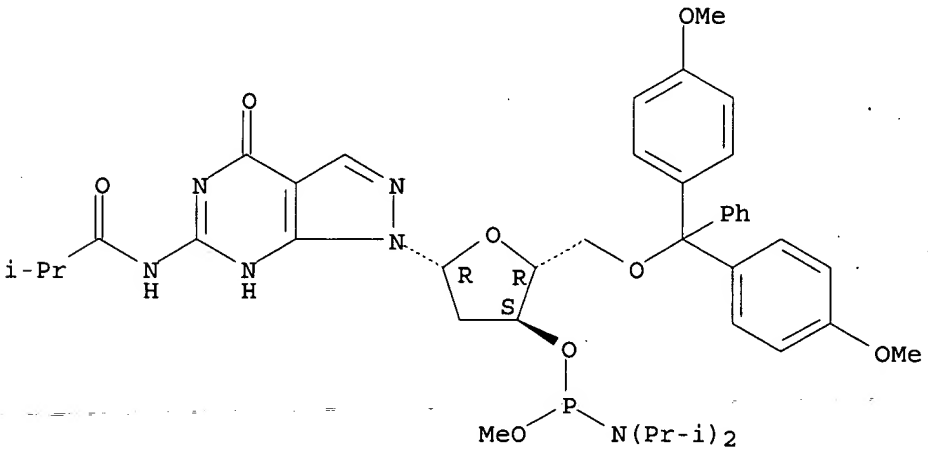
AB The synthesis of alternating hexamers derived from d(C-G)3 or d(G-C)3 but contg. c7z8Gd (I, X = N) or c7Gd (I, X = CH) instead of dG is described employing phosphoramidite-chem. Apart from the isobutyryl group, the dimethylaminomethylene residue was used for the nucleobase-protection of I (X = CH). The methyl- and the cyanoethyl-phosphoramidites of I (X = CH) were prepd. They were employed together with those of c7G or c7z8Gd in automated oligonucleotide synthesis. Tm-values as well as thermodn. data of the oligomers indicated that duplexes were destabilized if c7Gd replaced dG, whereas c7z8Gd stabilized the duplex structure. In contrast to d(C-G)3 which underwent salt-dependent B-Z transition, the CD spectra of oligomers contg. c7Gd or c7z8Gd in place of dG showed retained .beta.-conformation.

IT **118907-75-8 118907-76-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(use of, in synthesis of hexanucleotides)

RN 118907-75-8 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

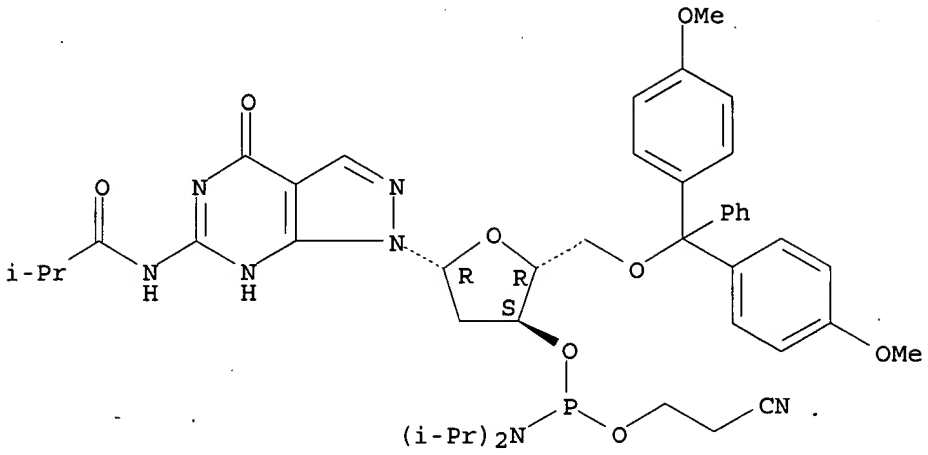


RN 118907-76-9 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-

methyl- (9CI) (CA INDEX NAME)

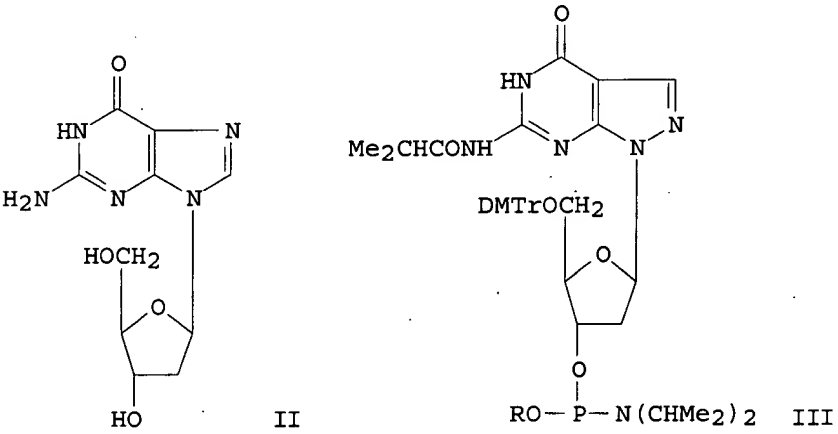
Absolute stereochemistry.



L16 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:	1989:75966 CAPLUS
DOCUMENT NUMBER:	110:75966
TITLE:	8-Aza-7-deaza-2'-deoxyguanosine: phosphoramidite synthesis and properties of octanucleotides
AUTHOR(S):	Seela, Frank; Driller, Hansjuergen
CORPORATE SOURCE:	Lab. Org. Bioorgan. Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.
SOURCE:	Helvetica Chimica Acta (1988), 71(5), 1191-8 CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE:	Journal
LANGUAGE:	English
OTHER SOURCE(S):	CASREACT 110:75966

GI



II III

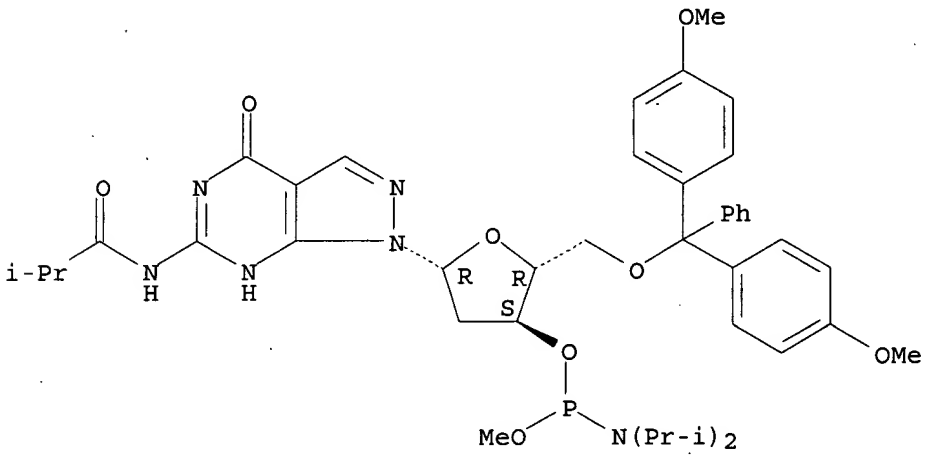
AB Base-modified octanucleotides derived from d(G1-G2-A-A-T-T-C-C) (I) but contg. 8-aza-7-deaza-2'-deoxyguanosine (II) instead of 2'-deoxyguanosine have been prepd. by solid-phase synthesis employing P(III) chem. Isobutyrylation of II, followed by 4,4'-dimethoxytritylation and subsequent phosphitylation yielded the Me or the cyanoethyl phosphoramidites III [R = Me, (CH2)2CN], resp. They were used as building blocks in automated DNA synthesis. The resulting octanucleotides contg.

II showed increased Tm values compared to the parent oligomer I. The oligomers prepd. were employed as sequence-specific probes in endodeoxyribonuclease Eco RI oligonucleotide recognition. Whereas displacement of dG-2 (enzymic cleavage site of I) abolished phosphodiester hydrolysis, replacement of dG-1 enhanced the cleavage rate compared to I.

IT **118907-75-8P 118907-76-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, intermediate in synthesis of octanucleotides)

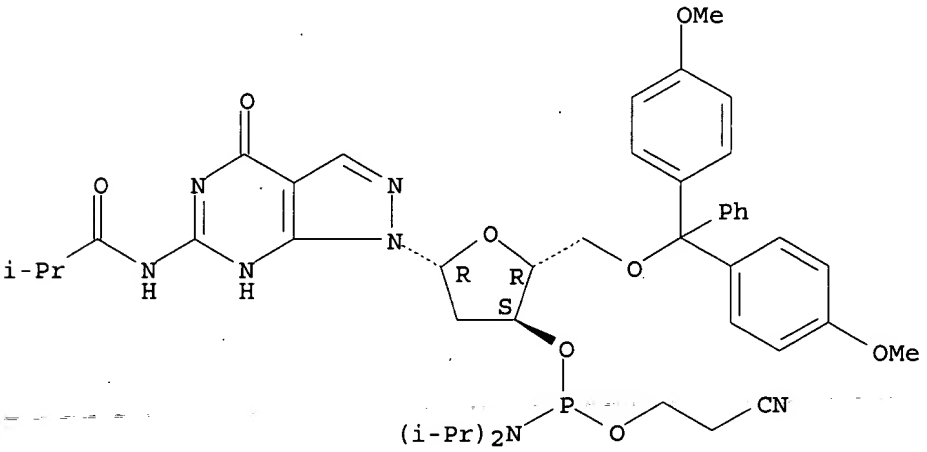
RN 118907-75-8 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 118907-76-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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d his

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L2               5 S L1 SSS SAM
L3             102 S L1 SSS FULL

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L5               0 S L3 AND PHOSPHORAMIDITE NUCLEOSIDE
L6               3 S L3 AND PHOSPHORAMIDITE
L7               3 DUP REM L6 (0 DUPLICATES REMOVED)
L8               3 S L3 AND PHOSPHORAMIDITES
L9              30 S L3 AND NUCLEOSIDE
L10              5 S L9 AND PHOSP?

     FILE 'REGISTRY' ENTERED AT 15:20:31 ON 19 AUG 2003
L11              STRUCTURE UPLOADED
L12              0 S L11 SSS SAM
L13              5 S L11 SSS FULL

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L14              6 S L13

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L15              5 DUP REM L13 (0 DUPLICATES REMOVED)

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     FILE 'CAPLUS, MEDLINE' ENTERED AT 15:23:31 ON 19 AUG 2003
L16              6 S L13
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Uploading phos-nuc3.str

L17     STRUCTURE UPLOADED

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YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS' - CONTINUE? (Y)/N:n


=> d l17
L17 HAS NO ANSWERS
L17              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.


=> s l17 sss sam
SAMPLE SEARCH INITIATED 15:30:34 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       6 TO ITERATE

100.0% PROCESSED        6 ITERATIONS                                  0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE   **COMPLETE**
                        BATCH    **COMPLETE**
PROJECTED ITERATIONS:             6 TO      266
PROJECTED ANSWERS:                0 TO        0

L18           0 SEA SSS SAM L17

=> s l17 sss full
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FULL SCREEN SEARCH COMPLETED -      67 TO ITERATE

100.0% PROCESSED       67 ITERATIONS                                  0 ANSWERS
SEARCH TIME: 00.00.01

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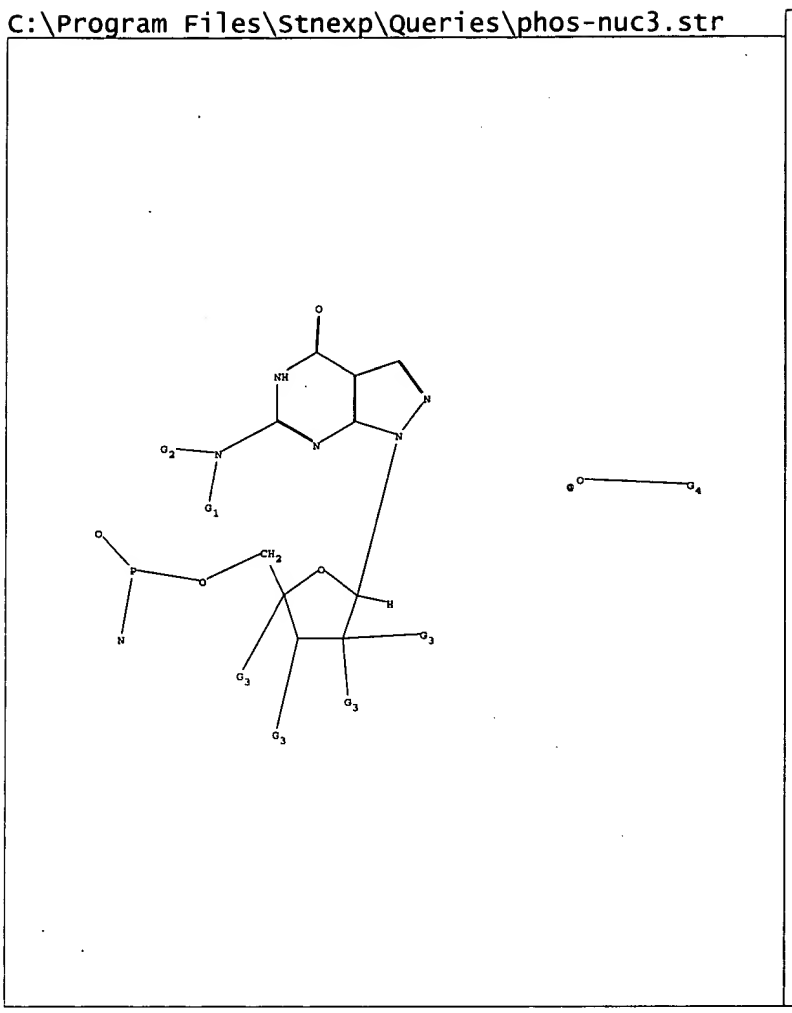

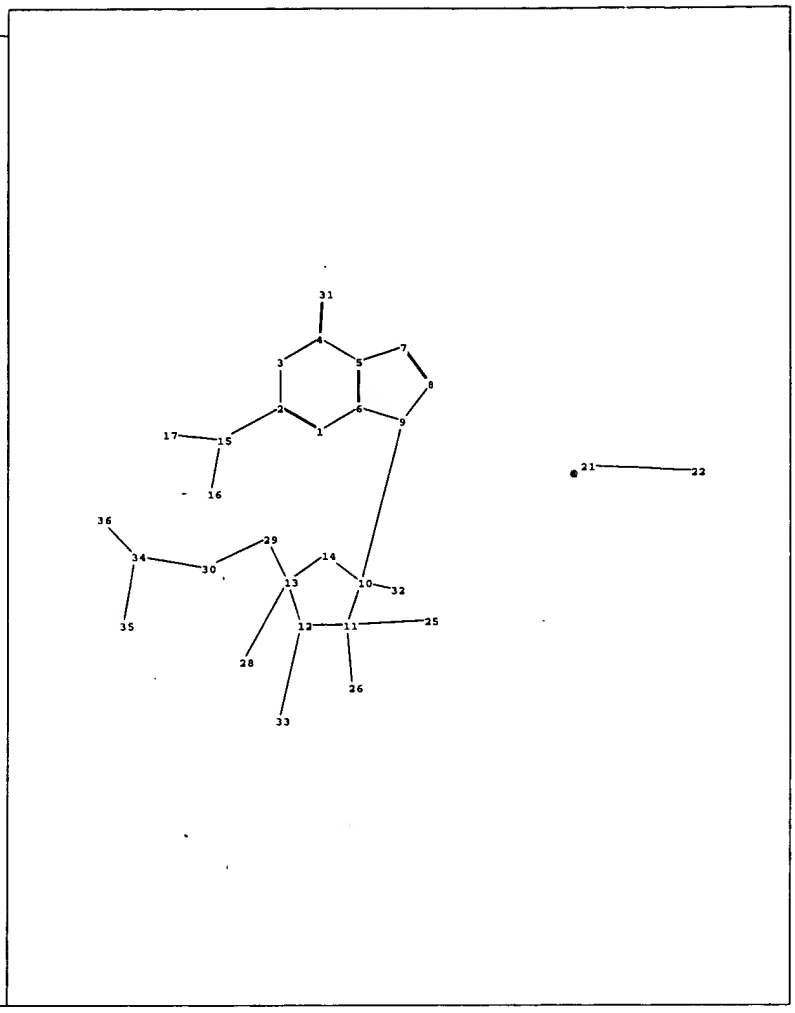

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ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
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30-34 34-35 34-36
ring bonds :
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exact/norm bonds :
1-2 1-6 2-3 2-15 3-4 4-5 4-31 5-6 5-7 6-9 7-8 8-9 9-10 10-11 10-14 11-12
11-25 11-26 12-13 12-33 13-14 13-28 15-16 15-17 21-22 30-34 34-35 34-36
exact bonds :
10-32 13-29 29-30

G1:H,Ak

G2:H,Ak,N

G3:H,X,Ak

G4:H,Ak,O

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 21:CLASS 22:CLASS 25:CLASS
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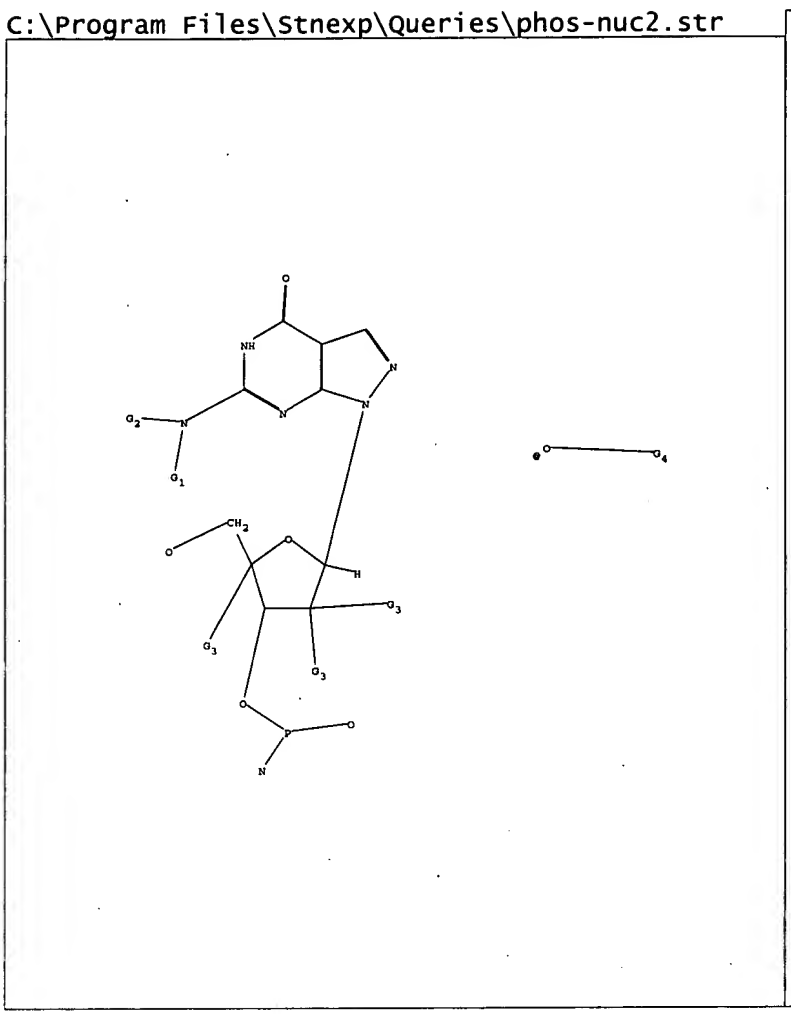

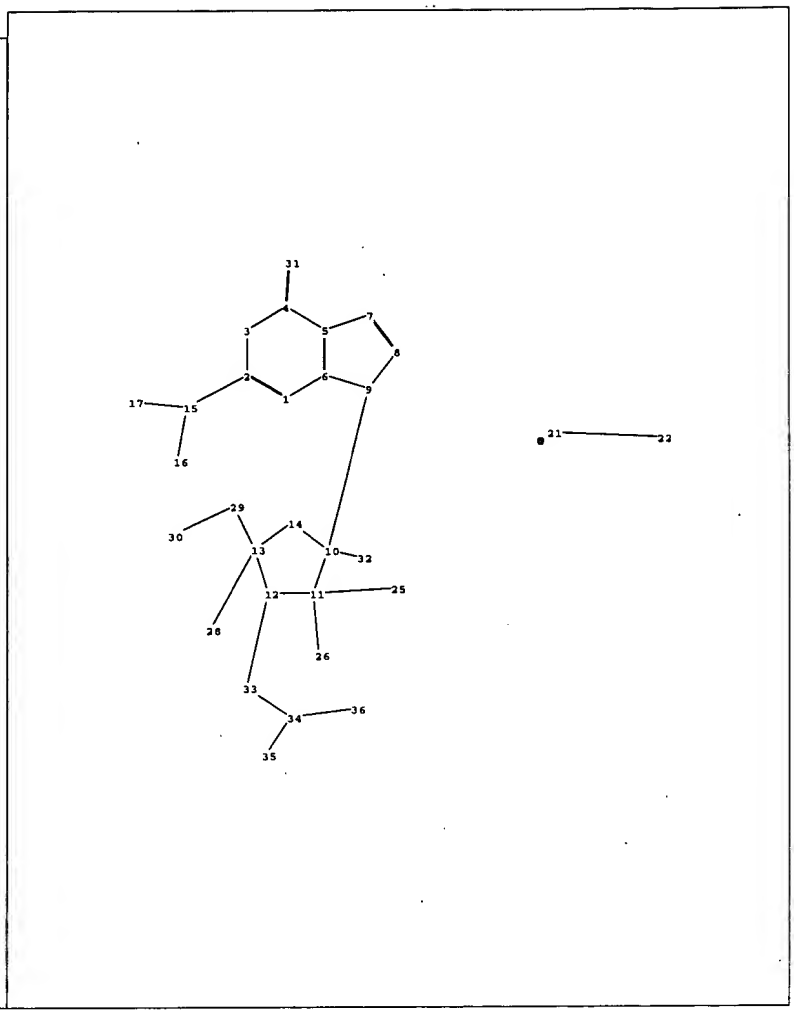

chain nodes :
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ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 10-11 10-14 11-12 12-13 13-14
exact/norm bonds :
1-2 1-6 2-3 2-15 3-4 4-5 4-31 5-6 5-7 6-9 7-8 8-9 9-10 10-11 10-14 11-12
11-25 11-26 12-13 12-33 13-14 13-28 15-16 15-17 21-22 33-34 34-35 34-36
exact bonds :
10-32 13-29 29-30

G1:H,Ak

G2:H,Ak,N

G3:H,X,Ak

G4:H,Ak,O

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 21:CLASS 22:CLASS 25:CLASS
26:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:CLASS 34:CLASS 35:CLASS
36:CLASS

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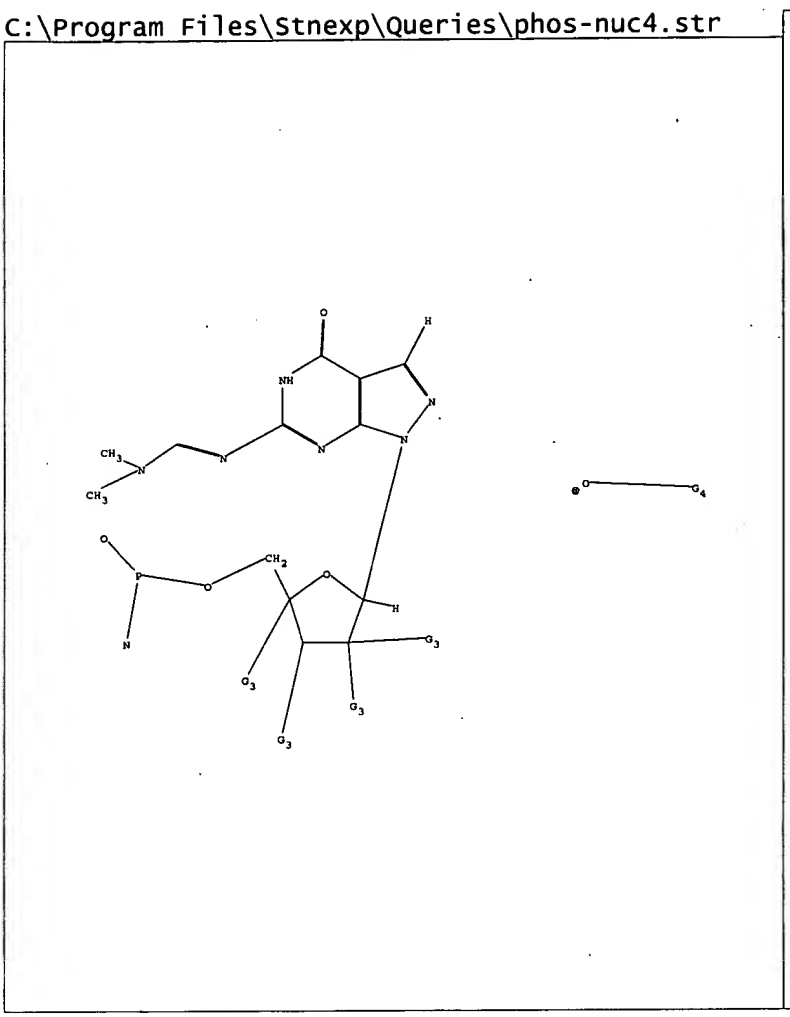

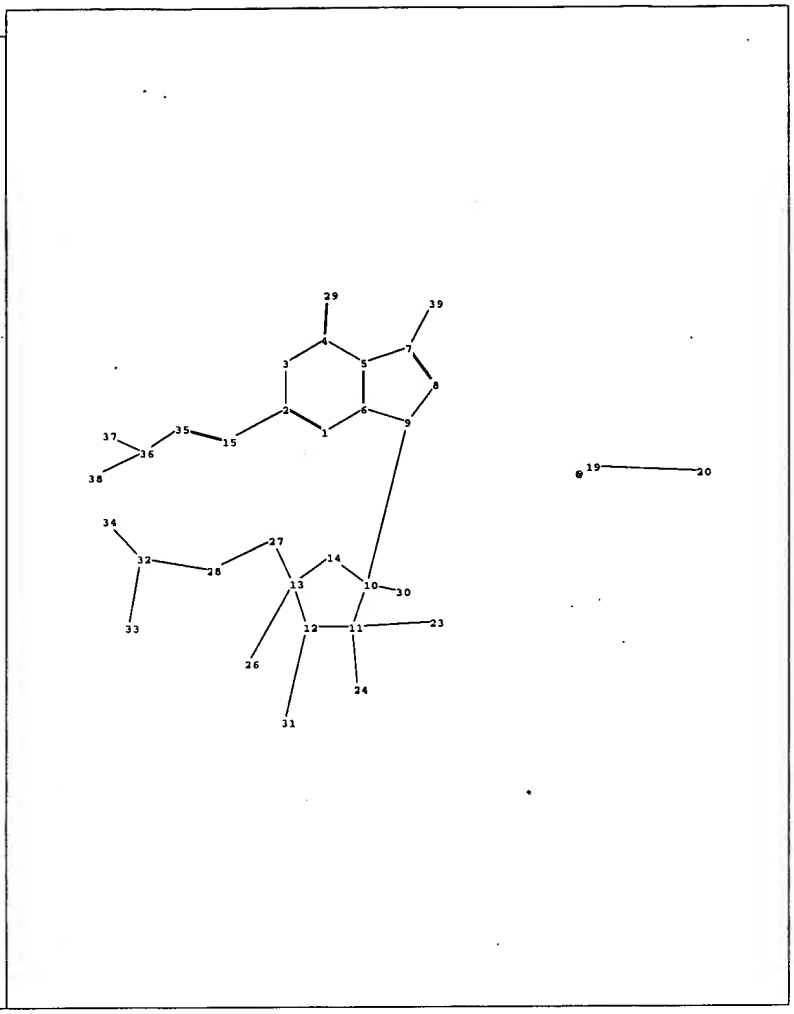

chain nodes :
15 19 20 23 24 26 27 28 29 30 31 32 33 34 35 36 37 38 39
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
2-15 4-29 7-39 9-10 10-30 11-23 11-24 12-31 13-26 13-27 15-35 19-20 27-28
28-32 32-33 32-34 35-36 36-37 36-38
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 10-11 10-14 11-12 12-13 13-14
exact/norm bonds :
1-2 1-6 2-3 2-15 3-4 4-5 4-29 5-6 5-7 6-9 7-8 8-9 9-10 10-11 10-14 11-12
11-23 11-24 12-13 12-31 13-14 13-26 15-35 19-20 28-32 32-33 32-34 35-36
exact bonds :
7-39 10-30 13-27 27-28 36-37 36-38

G1:H,Ak

G2:H,Ak,N

G3:H,X,Ak

G4:H,Ak,O

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:CLASS 19:CLASS 20:CLASS 23:CLASS 24:CLASS 26:CLASS
27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:CLASS 34:CLASS 35:CLASS
36:CLASS 37:CLASS 38:CLASS 39:CLASS

```
ploading phos-nuc4.str

L1      STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.


=> s l1 sss sam
SAMPLE SEARCH INITIATED 09:03:28 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -      0 TO ITERATE

100.0% PROCESSED       0 ITERATIONS                                 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:            0 TO        0
PROJECTED ANSWERS:               0 TO        0

L2            0 SEA SSS SAM L1

=> s l1 sss full
FULL SEARCH INITIATED 09:03:37 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     25 TO ITERATE

100.0% PROCESSED      25 ITERATIONS                                 0 ANSWERS
SEARCH TIME: 00.00.01

L3            0 SEA SSS FUL L1
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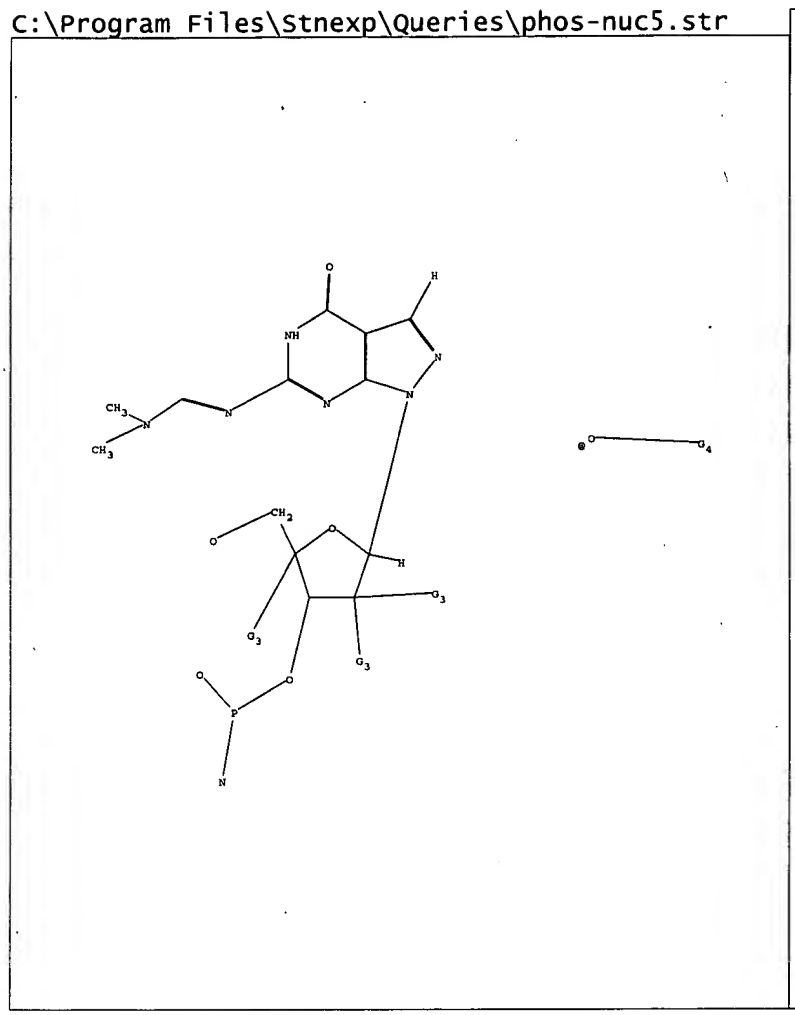
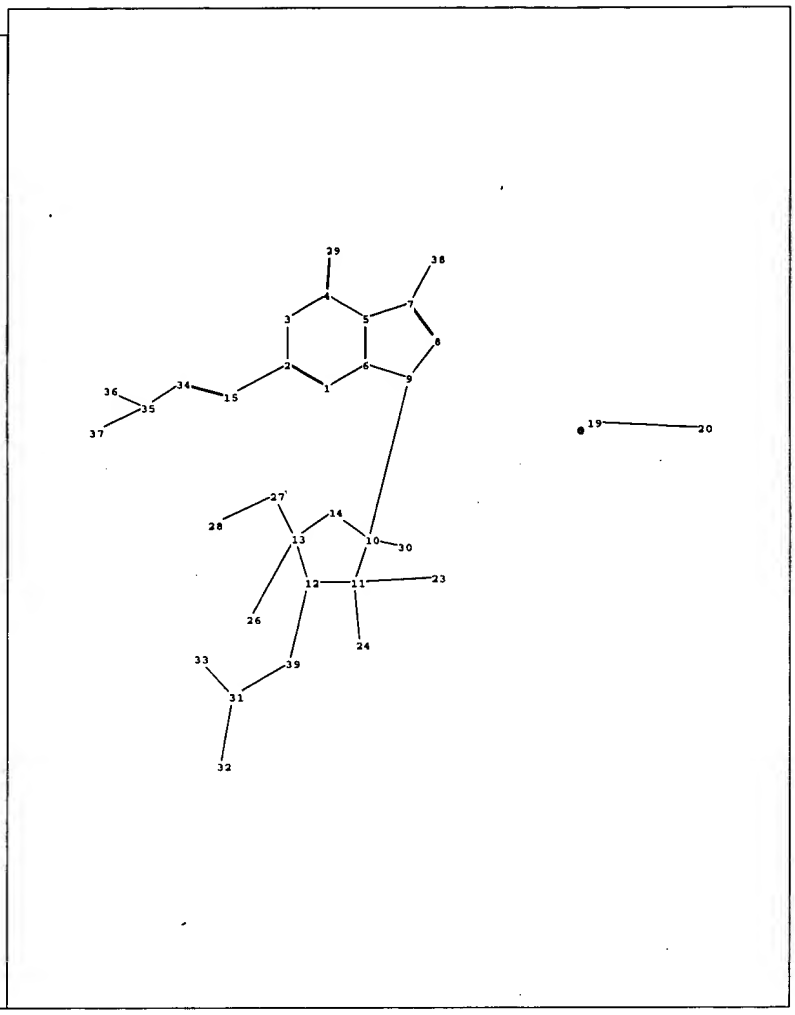




chain nodes :
15 19 20 23 24 26 27 28 29 30 31 32 33 34 35 36 37 38 39
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
2-15 4-29 7-38 9-10 10-30 11-23 11-24 12-39 13-26 13-27 15-34 19-20 27-28
31-33 31-32 31-39 34-35 35-36 35-37
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 10-11 10-14 11-12 12-13 13-14
exact/norm bonds :
1-2 1-6 2-3 2-15 3-4 4-5 4-29 5-6 5-7 6-9 7-8 8-9 9-10 10-11 10-14 11-12
11-23 11-24 12-13 12-39 13-14 13-26 15-34 19-20 31-33 31-32 31-39 34-35
exact bonds :
7-38 10-30 13-27 27-28 35-36 35-37

G1:H,Ak

G2:H,Ak,N

G3:H,X,Ak

G4:H,Ak,O

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:CLASS 19:CLASS 20:CLASS 23:CLASS 24:CLASS 26:CLASS
27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:CLASS 34:CLASS 35:CLASS
36:CLASS 37:CLASS 38:CLASS 39:CLASS

loading phos-nuc5.str

L4 STRUCTURE UPLOADED

=> d l4
L4 HAS NO ANSWERS
L4 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> s l4 sss sam
SAMPLE SEARCH INITIATED 09:06:30 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 0 TO 0
PROJECTED ANSWERS: 0 TO 0

L5 0 SEA SSS SAM L4

=> s l4 sss full
FULL SEARCH INITIATED 09:06:38 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 25 TO ITERATE

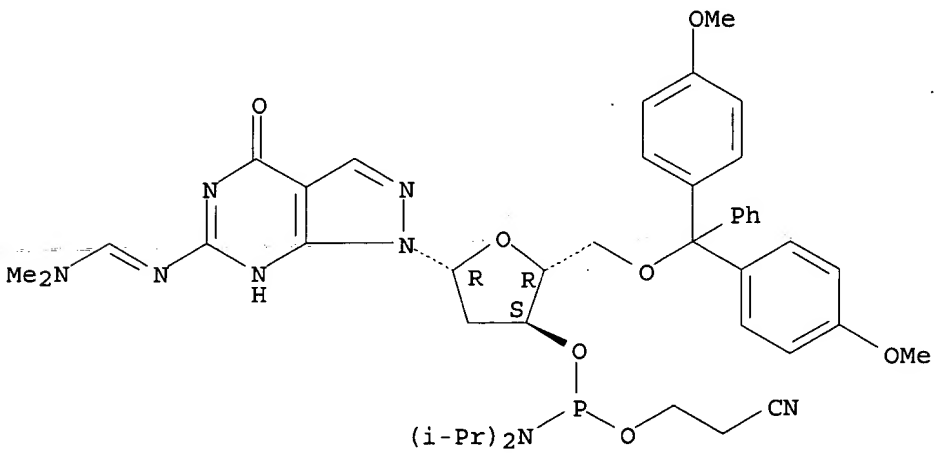
100.0% PROCESSED 25 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

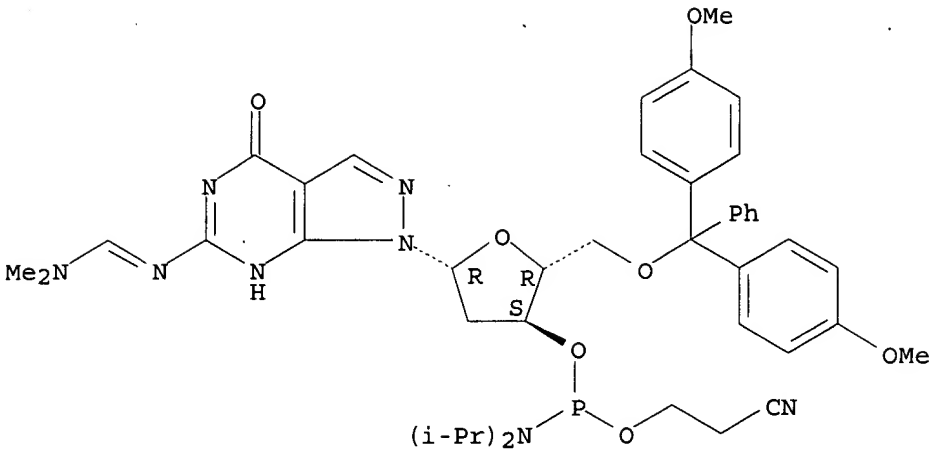
L6 1 SEA SSS FUL L4

=> d scan

L6 1 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN
IN Methanimidamide, N'-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-N,N-dimethyl- (9CI)
MF C43 H53 N8 O7 P

Absolute stereochemistry.
Double bond geometry unknown.





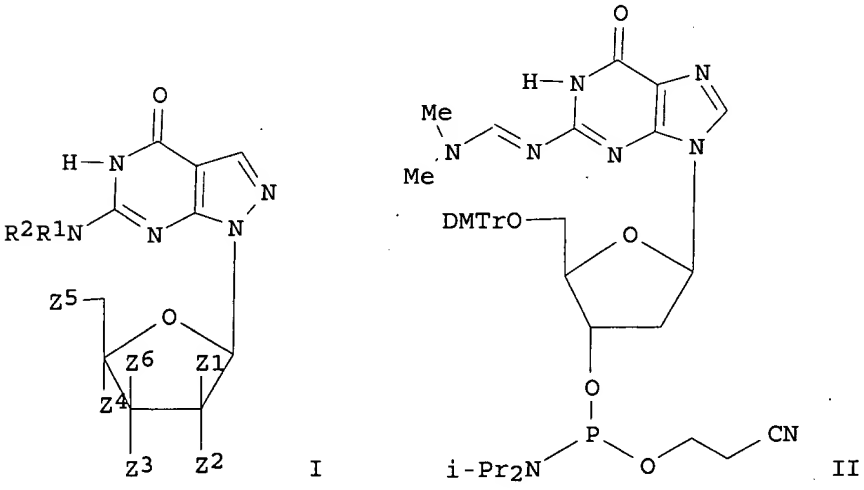
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:221699 CAPLUS
DOCUMENT NUMBER: 138:221790
TITLE: Process for the synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups
INVENTOR(S): Dempcy, Robert O.; Adams, A. David; Reed, Michael W.
PATENT ASSIGNEE(S): Epoch Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022859	A2	20030320	WO 2002-US28476	20020905
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003078413	A1	20030424	US 2001-954624	20010912

PRIORITY APPLN. INFO.: US 2001-954624 A 20010912
OTHER SOURCE(S): CASREACT 138:221790; MARPAT 138:221790
GI



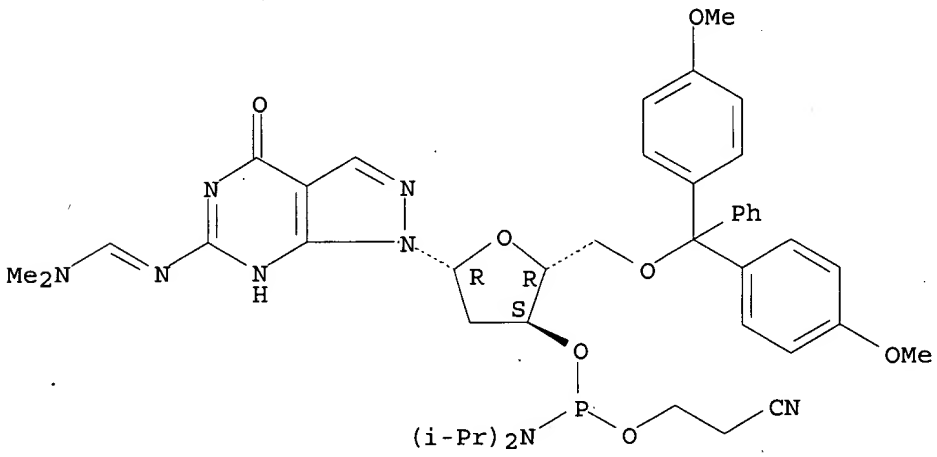
AB The present invention provides a nucleosides comprising a pyrazolopyrimidine base I and a process for producing the same. In particular, the processes of the present invention comprises using a halogenated pyrazolopyrimidine base and removing the halogen after the base is coupled to a sugar moiety. The presence of the halogen on the nucleoside base allows facile and economical prodn. of a large quantity of nucleosides. Thus, II was prepd. via halogenation reaction and using photolabile hydroxy protecting groups.

IT **500891-26-9P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)

RN 500891-26-9 CAPLUS

CN Methanimidamide, N'-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-N,N-dimethyl- (9CI) (CA INDEX NAME)

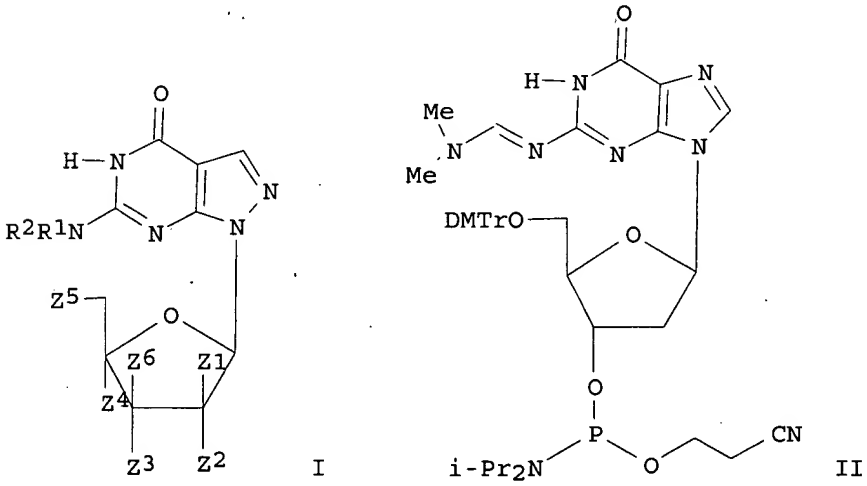
Absolute stereochemistry.
Double bond geometry unknown.



L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:221699 CAPLUS
DOCUMENT NUMBER: 138:221790
TITLE: Process for the synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups
INVENTOR(S): Dempcy, Robert O.; Adams, A. David; Reed, Michael W.
PATENT ASSIGNEE(S): Epoch Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022859	A2	20030320	WO 2002-US28476	20020905
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003078413	A1	20030424	US 2001-954624	20010912

PRIORITY APPLN. INFO.: US 2001-954624 A 20010912
OTHER SOURCE(S): CASREACT 138:221790; MARPAT 138:221790
GI



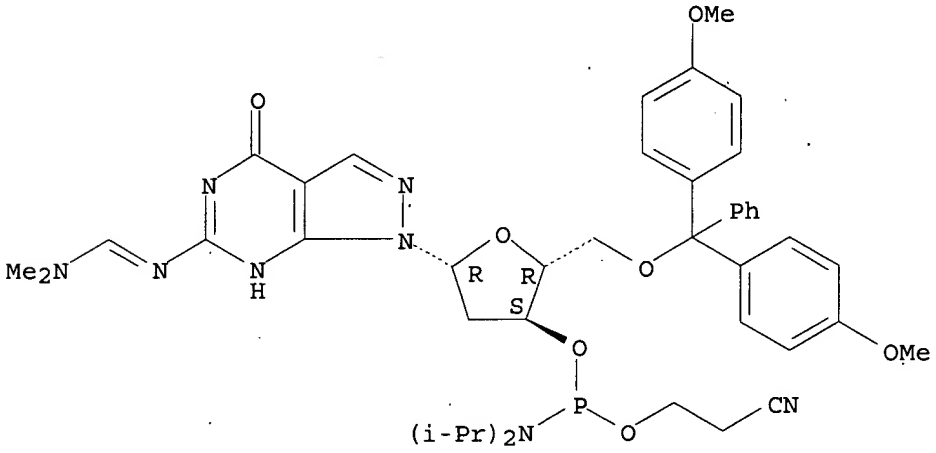
AB The present invention provides a nucleosides comprising a pyrazolopyrimidine base I and a process for producing the same. In particular, the processes of the present invention comprises using a halogenated pyrazolopyrimidine base and removing the halogen after the base is coupled to a sugar moiety. The presence of the halogen on the nucleoside base allows facile and economical prodn. of a large quantity of nucleosides. Thus, II was prepd. via halogenation reaction and using photolabile hydroxy protecting groups.

IT **500891-26-9P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)

RN 500891-26-9 CAPLUS

CN Methanimidamide, N'-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-N,N-dimethyl- (9CI) (CA INDEX NAME)

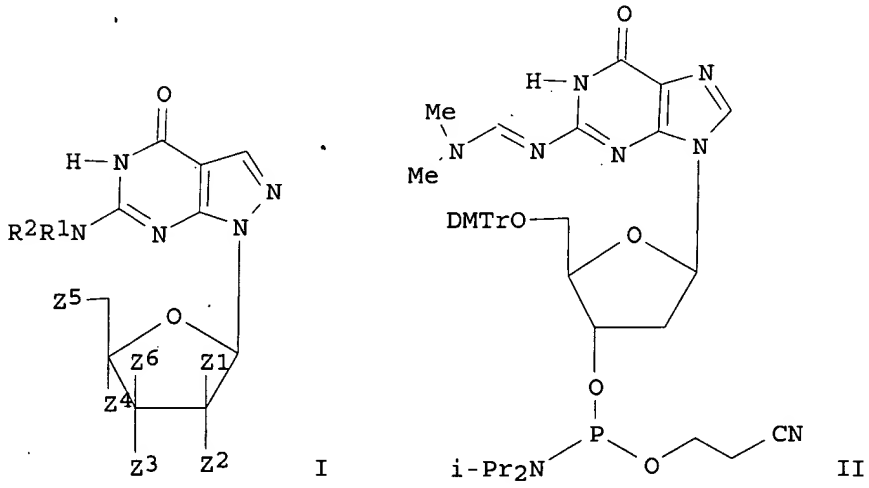
Absolute stereochemistry.
Double bond geometry unknown.



L13 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:221699 CAPLUS
DOCUMENT NUMBER: 138:221790
TITLE: Process for the synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups
INVENTOR(S): Dempcy, Robert O.; Adams, A. David; Reed, Michael W.
PATENT ASSIGNEE(S): Epoch Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022859	A2	20030320	WO 2002-US28476	20020905
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003078413	A1	20030424	US 2001-954624	20010912

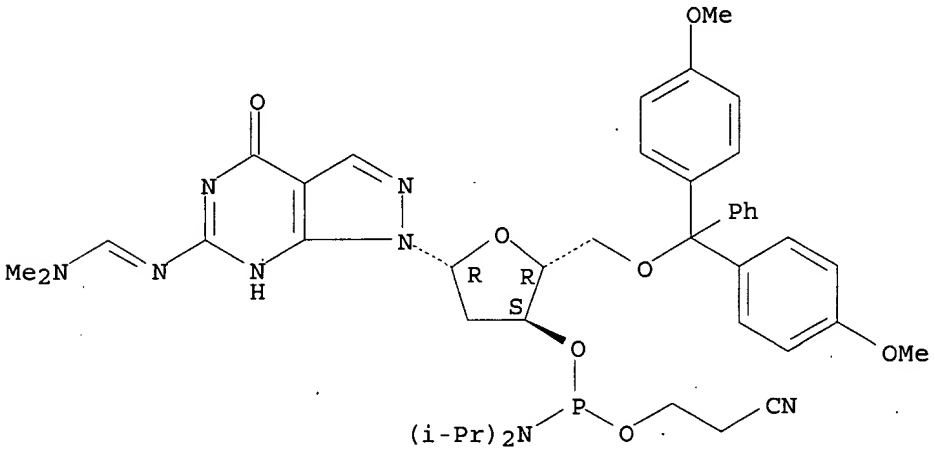
PRIORITY APPLN. INFO.: US 2001-954624 A 20010912
OTHER SOURCE(S): CASREACT 138:221790; MARPAT 138:221790
GI



AB The present invention provides a nucleosides comprising a pyrazolopyrimidine base I and a process for producing the same. In particular, the processes of the present invention comprises using a halogenated pyrazolopyrimidine base and removing the halogen after the base is coupled to a sugar moiety. The presence of the halogen on the nucleoside base allows facile and economical prodn. of a large quantity of nucleosides. Thus, II was prepd. via halogenation reaction and using photolabile hydroxy protecting groups.

IT **500891-26-9P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)
RN 500891-26-9 CAPLUS
CN Methanimidamide, N'-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-N,N-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



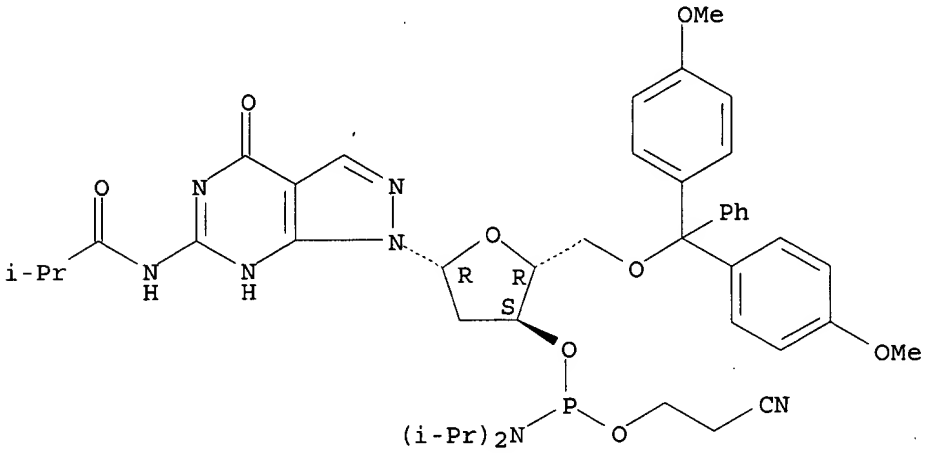
L13 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:693428 CAPLUS
DOCUMENT NUMBER: 132:64475
TITLE: Oligonucleotides containing pyrazolo[3,4-d]pyrimidines: the influence of 7-substituted 8-aza-7-deaza-2'-deoxyguanosines on the duplex structure and stability
AUTHOR(S): Seela, Frank; Becher, Georg
CORPORATE SOURCE: Laboratorium fur Organische und Bioorganische Chemie, Institut fur Chemie, Universitat Osnabruck, Osnabruck, D-49069, Germany
SOURCE: Helvetica Chimica Acta (1999), 82(10), 1640-1655
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Oligonucleotides contg. 7-substituted 8-aza-7-deazaguanines (= 6-amino-1,5-dihydro-4H-pyrazolo[3,4-d]pyrimidin-4-ones) were prepd. by automated solid-phase synthesis. A series of 7-alkynylated 8-aza-7-deaza-2'-deoxyguanosines were synthesized with the 7-iodonucleoside as starting material and by the Pd0/Cu1-catalyzed cross-coupling reaction with various alkynes. Phosphoramidites were prepd. from the 7-substituted 8-aza-7-deaza-2'-deoxyguanosine derivs. carrying halogeno, cyano, and hexynyl substituents. From the melting profiles of oligonucleotide duplexes, the Tm values as well as the thermodn. data were detd. A significant duplex stabilization by the 7-substituents was obsd. for the DNA .cntdot. DNA duplexes, but not in the case of DNA .cntdot. RNA hybrids.
IT **118907-76-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of oligonucleotides contg. pyrazolo[3,4-d]pyrimidines and the

influence of substituted deazadeoxyguanosines on the duplex structure and stability)

RN 118907-76-9 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1990:119293 CAPLUS

DOCUMENT NUMBER: 112:119293

TITLE: Pyrazolo[3,4-d]pyrimidine 2'-deoxyribo- and 2',3'-dideoxyribofuranosides: synthesis and application to oligonucleotide chemistry

AUTHOR(S): Seela, F.; Driller, H.; Kaiser, K.; Rosemeyer, H.; Steker, H.

CORPORATE SOURCE: Lab. Org. Bioorg. Chem., Univ. Osnabrueck, Fed. Rep. Ger.

SOURCE: Nucleosides & Nucleotides (1989), Volume Date 1988, 8(5-6), 789-92
CODEN: NUNUD5; ISSN: 0732-8311

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 112:119293

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A symposium communication on the synthesis of pyrazolopyrimidine deoxyribonucleosides, e.g., I (R = NH2, H; R1 = H, NH2) and II (R2 = H, NH2), is described employing either liq.-liq. or solid-liq. phase-transfer glycosylation. From I (R = NH2, R1 = H) and II (R2= NH2), the phosphoramidates III (R3 = Me, CH2CH2CN, DMT = dimethoxytrityl) and IV were prepd. They were used in automated solid-phase synthesis of 10 oligonucleotides. Deoxygenation of I (R = NH2, R1 = H) and II (R2 = NH2) yielded pyrazolopyrimidine 2',3'-dideoxynucleosides isosteric to ddA, ddG, and ddI.

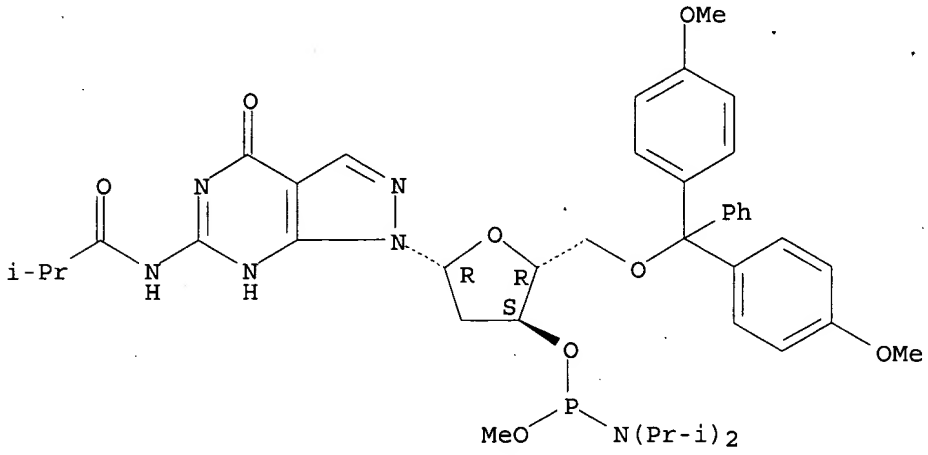
IT **118907-75-8P 118907-76-9P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for synthesis of oligonucleotides)

RN 118907-75-8 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

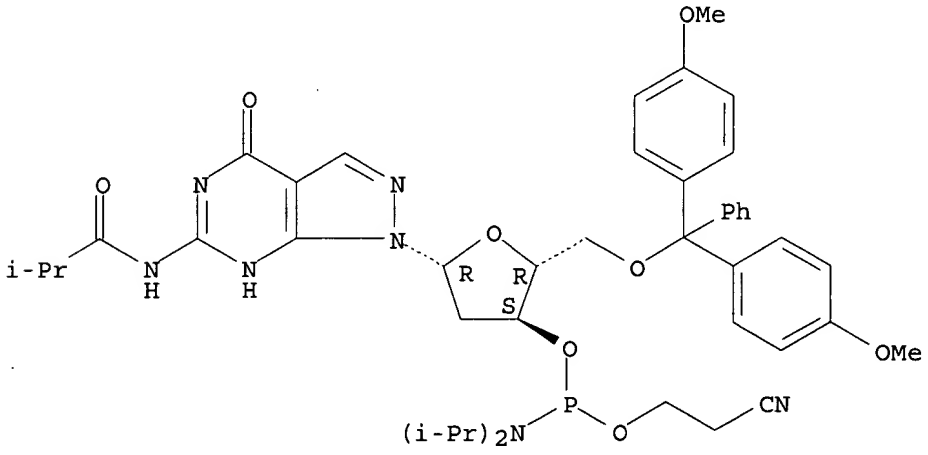
Absolute stereochemistry.



RN 118907-76-9 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L13 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1989:458263 CAPLUS

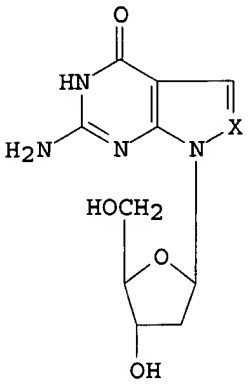
DOCUMENT NUMBER: 111:58263

TITLE: Alternating d(G-C)3 and d(C-G)3 hexanucleotides containing 7-deaza-2'-deoxyguanosine or 8-aza-7-deaza-2'-deoxyguanosine in place of dG

AUTHOR(S): Seela, Frank; Driller, Hansjuergen

CORPORATE SOURCE: Fachber. Biol./Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.

SOURCE: Nucleic Acids Research (1989), 17(3), 901-10
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

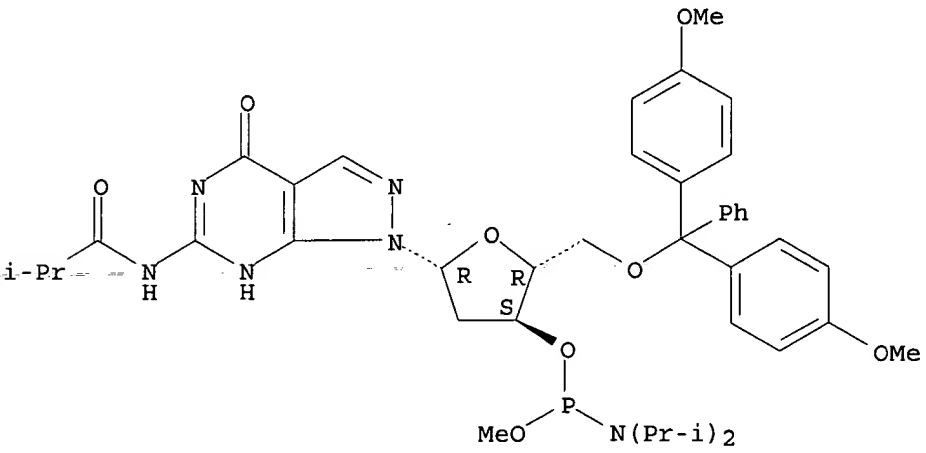
AB The synthesis of alternating hexamers derived from d(C-G)3 or d(G-C)3 but contg. c7z8Gd (I, X = N) or c7Gd (I, X = CH) instead of dG is described employing phosphoramidite-chem. Apart from the isobutyryl group, the dimethylaminomethylene residue was used for the nucleobase-protection of I (X = CH). The methyl- and the cyanoethyl-phosphoramidites of I (X = CH) were prepd. They were employed together with those of c7G or c7z8Gd in automated oligonucleotide synthesis. Tm-values as well as thermodn. data of the oligomers indicated that duplexes were destabilized if c7Gd replaced dG, whereas c7z8Gd stabilized the duplex structure. In contrast to d(C-G)3 which underwent salt-dependent B-Z transition, the CD spectra of oligomers contg. c7Gd or c7z8Gd in place of dG showed retained .beta.-conformation.

IT **118907-75-8 118907-76-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(use of, in synthesis of hexanucleotides)

RN 118907-75-8 CAPLUS

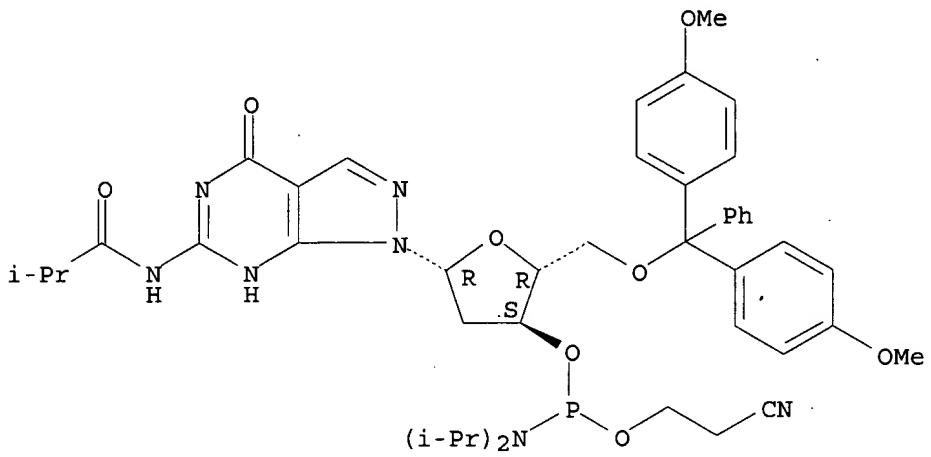
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

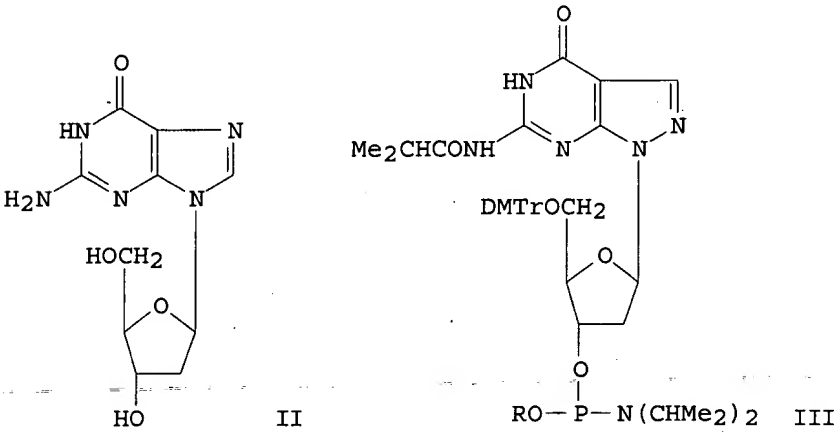


RN 118907-76-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L13 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:75966 CAPLUS
DOCUMENT NUMBER: 110:75966
TITLE: 8-Aza-7-deaza-2'-deoxyguanosine: phosphoramidite synthesis and properties of octanucleotides
AUTHOR(S): Seela, Frank; Driller, Hansjuergen
CORPORATE SOURCE: Lab. Org. Bioorgan. Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.
SOURCE: Helvetica Chimica Acta (1988), 71(5), 1191-8
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:75966
GI



AB Base-modified octanucleotides derived from d(G1-G2-A-A-T-T-C-C) (I) but contg. 8-aza-7-deaza-2'-deoxyguanosine (II) instead of 2'-deoxyguanosine have been prepd. by solid-phase synthesis employing P(III) chem.

Isobutyrylation of II, followed by 4,4'-dimethoxytritylation and subsequent phosphitylation yielded the Me or the cyanoethyl phosphoramidites III [R = Me, (CH2)2CN], resp. They were used as building blocks in automated DNA synthesis. The resulting octanucleotides contg. II showed increased Tm values compared to the parent oligomer I. The oligomers prepd. were employed as sequence-specific probes in endodeoxyribonuclease Eco RI oligonucleotide recognition. Whereas displacement of dG-2 (enzymic cleavage site of I) abolished phosphodiester hydrolysis, replacement of dG-1 enhanced the cleavage rate compared to I.

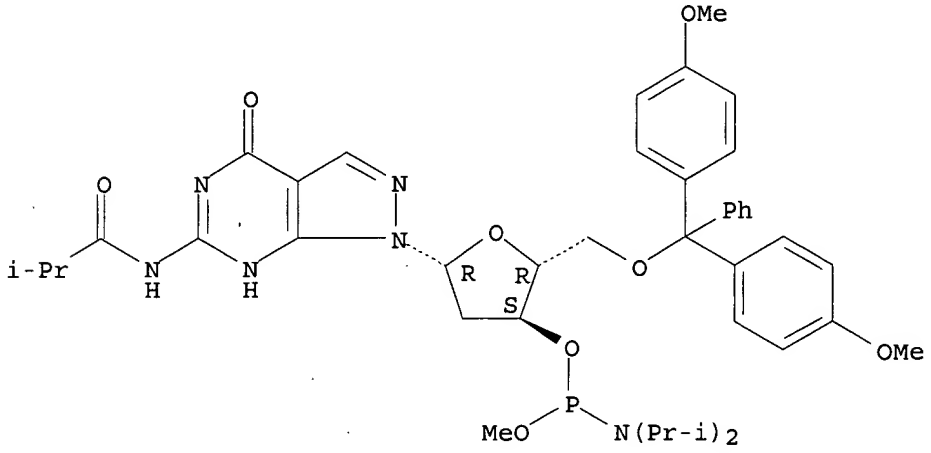
IT **118907-75-8P 118907-76-9P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, intermediate in synthesis of octanucleotides)

RN 118907-75-8 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

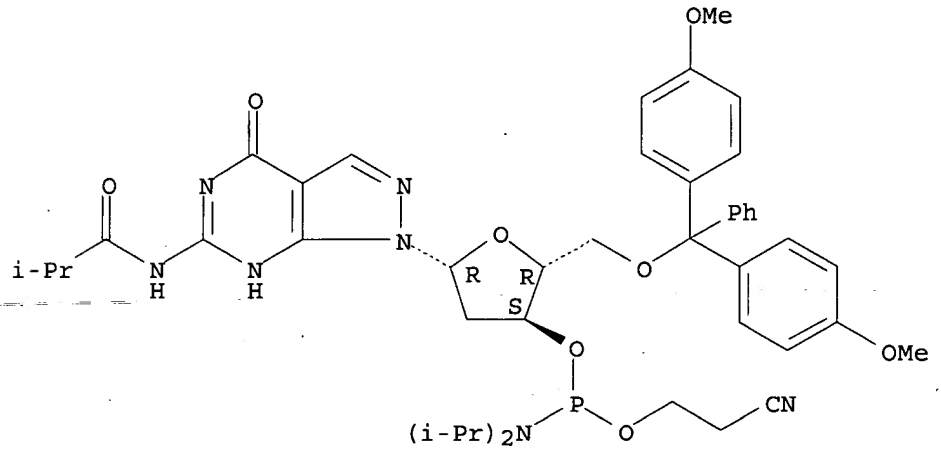
Absolute stereochemistry.



RN 118907-76-9 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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L4                STRUCTURE UPLOADED
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L6             1 S L4 SSS FULL

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L8                STRUCTURE UPLOADED
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L10            3 S L8 SSS FULL

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     FILE 'CAPLUS, MEDLINE' ENTERED AT 09:17:11 ON 21 AUG 2003
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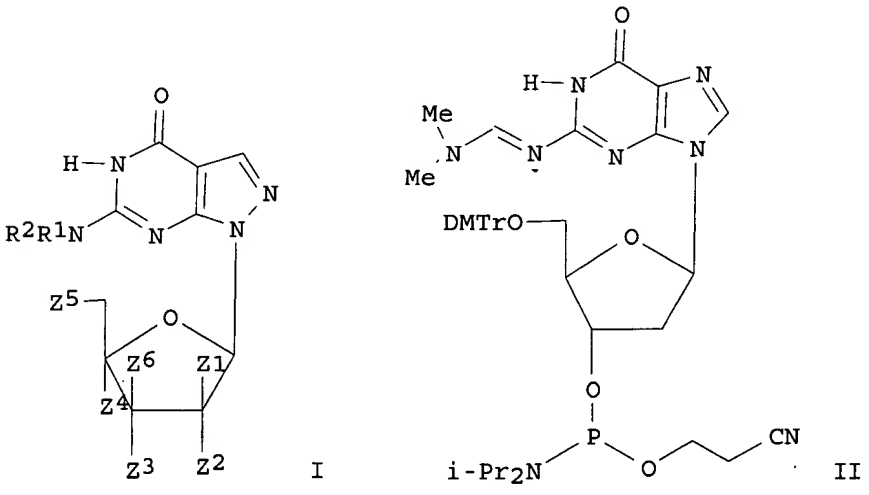
L13 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:221699 CAPLUS
DOCUMENT NUMBER: 138:221790
TITLE: Process for the synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups
INVENTOR(S): Dempcy, Robert O.; Adams, A. David; Reed, Michael W.
PATENT ASSIGNEE(S): Epoch Biosciences, Inc., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022859	A2	20030320	WO 2002-US28476	20020905
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003078413	A1	20030424	US 2001-954624	20010912

PRIORITY APPLN. INFO.: US 2001-954624 A 20010912
OTHER SOURCE(S): CASREACT 138:221790; MARPAT 138:221790
GI



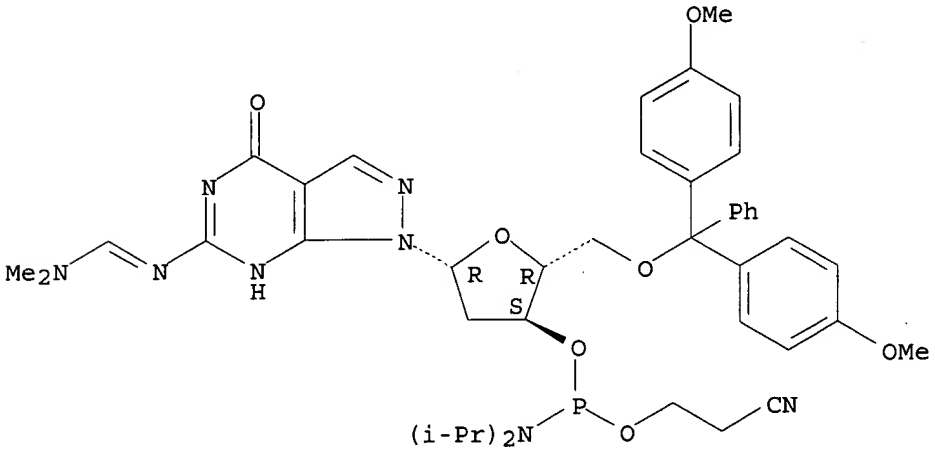
AB The present invention provides a nucleosides comprising a pyrazolopyrimidine base I and a process for producing the same. In particular, the processes of the present invention comprises using a halogenated pyrazolopyrimidine base and removing the halogen after the base is coupled to a sugar moiety. The presence of the halogen on the nucleoside base allows facile and economical prodn. of a large quantity of nucleosides. Thus, II was prepd. via halogenation reaction and using photolabile hydroxy protecting groups.

IT **500891-26-9P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for synthesis of pyrazolopyrimidine nucleosides via halogenation reaction and using photolabile hydroxy protecting groups)

RN 500891-26-9 CAPLUS

CN Methanimidamide, N'-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-N,N-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



L13 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:693428 CAPLUS
DOCUMENT NUMBER: 132:64475
TITLE: Oligonucleotides containing pyrazolo[3,4-d]pyrimidines: the influence of 7-substituted 8-aza-7-deaza-2'-deoxyguanosines on the duplex structure and stability
AUTHOR(S): Seela, Frank; Becher, Georg
CORPORATE SOURCE: Laboratorium fur Organische und Bioorganische Chemie, Institut fur Chemie, Universitat Osnabruck, Osnabruck, D-49069, Germany
SOURCE: Helvetica Chimica Acta (1999), 82(10), 1640-1655
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Oligonucleotides contg. 7-substituted 8-aza-7-deazaguanines (= 6-amino-1,5-dihydro-4H-pyrazolo[3,4-d]pyrimidin-4-ones) were prepd. by automated solid-phase synthesis. A series of 7-alkynylated 8-aza-7-deaza-2'-deoxyguanosines were synthesized with the 7-iodonucleoside as starting material and by the Pd0/Cu1-catalyzed cross-coupling reaction with various alkynes. Phosphoramidites were prepd. from the 7-substituted 8-aza-7-deaza-2'-deoxyguanosine derivs. carrying halogeno, cyano, and hexynyl substituents. From the melting profiles of oligonucleotide duplexes, the Tm values as well as the thermodn. data were detd. A significant duplex stabilization by the 7-substituents was obsd. for the DNA .cntdot. DNA duplexes, but not in the case of DNA .cntdot. RNA hybrids.

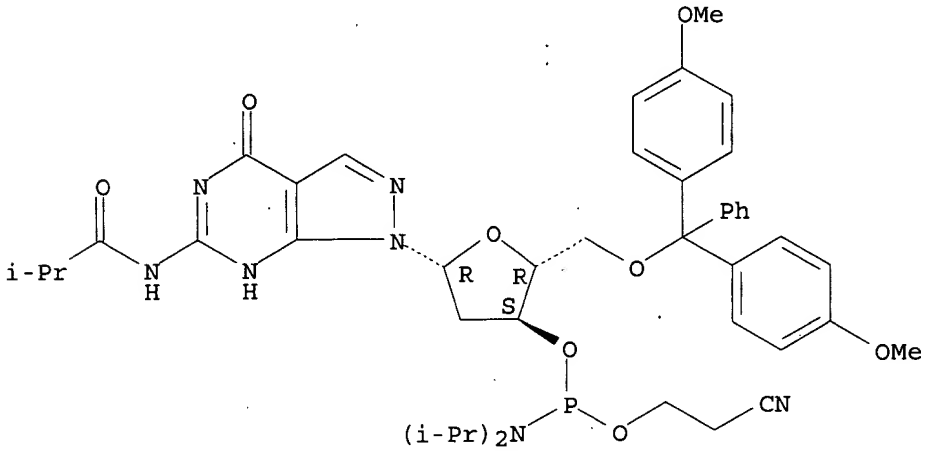
IT **118907-76-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of oligonucleotides contg. pyrazolo[3,4-d]pyrimidines and the

influence of substituted deazadeoxyguanosines on the duplex structure and stability)

RN 118907-76-9 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1990:119293 CAPLUS

DOCUMENT NUMBER: 112:119293

TITLE: Pyrazolo[3,4-d]pyrimidine 2'-deoxyribo- and 2',3'-dideoxyribofuranosides: synthesis and application to oligonucleotide chemistry

AUTHOR(S): Seela, F.; Driller, H.; Kaiser, K.; Rosemeyer, H.; Steker, H.

CORPORATE SOURCE: Lab. Org. Bioorg. Chem., Univ. Osnabrueck, Fed. Rep. Ger.

SOURCE: Nucleosides & Nucleotides (1989), Volume Date 1988, 8(5-6), 789-92
CODEN: NUNUD5; ISSN: 0732-8311

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 112:119293

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A symposium communication on the synthesis of pyrazolopyrimidine deoxyribonucleosides, e.g., I (R = NH2, H; R1 = H, NH2) and II (R2 = H, NH2), is described employing either liq.-liq. or solid-liq. phase-transfer glycosylation. From I (R = NH2, R1 = H) and II (R2= NH2), the phosphoramidates III (R3 = Me, CH2CH2CN, DMT = dimethoxytrityl) and IV were prepd. They were used in automated solid-phase synthesis of 10 oligonucleotides. Deoxygenation of I (R = NH2, R1 = H) and II (R2 = NH2) yielded pyrazolopyrimidine 2',3'-dideoxynucleosides isosteric to ddA, ddG, and ddI.

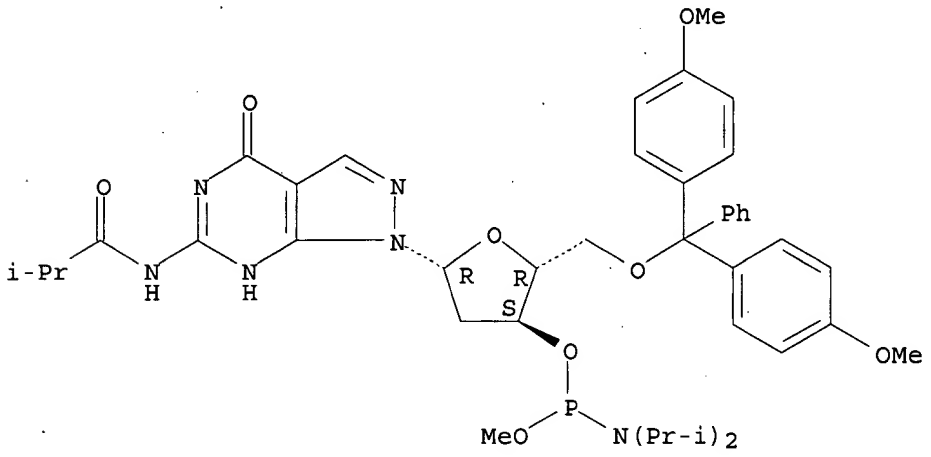
IT **118907-75-8P 118907-76-9P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for synthesis of oligonucleotides)

RN 118907-75-8 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

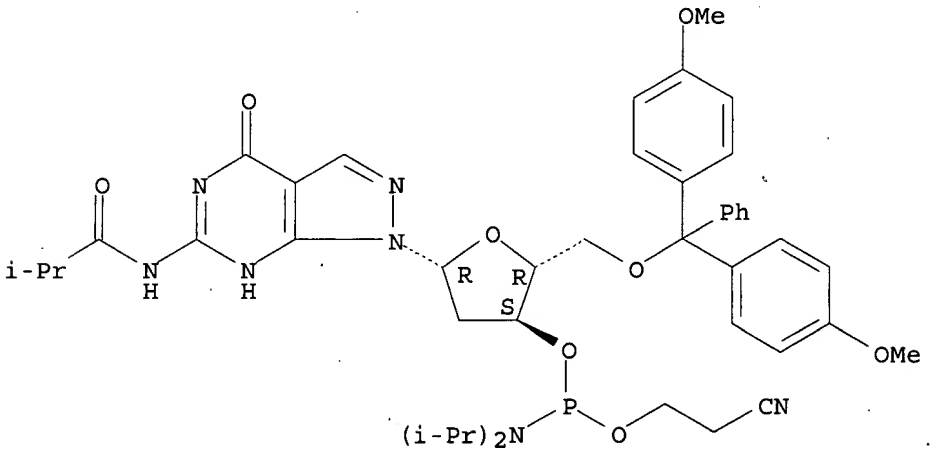
Absolute stereochemistry.



RN 118907-76-9 CAPLUS

CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L13 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1989:458263 CAPLUS

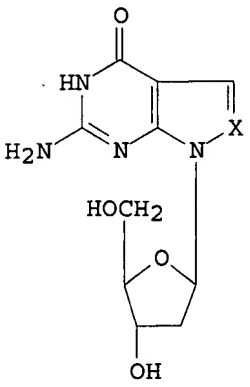
DOCUMENT NUMBER: 111:58263

TITLE: Alternating d(G-C)3 and d(C-G)3 hexanucleotides containing 7-deaza-2'-deoxyguanosine or 8-aza-7-deaza-2'-deoxyguanosine in place of dG

AUTHOR(S): Seela, Frank; Driller, Hansjuergen

CORPORATE SOURCE: Fachber. Biol./Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.

SOURCE: Nucleic Acids Research (1989), 17(3), 901-10
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

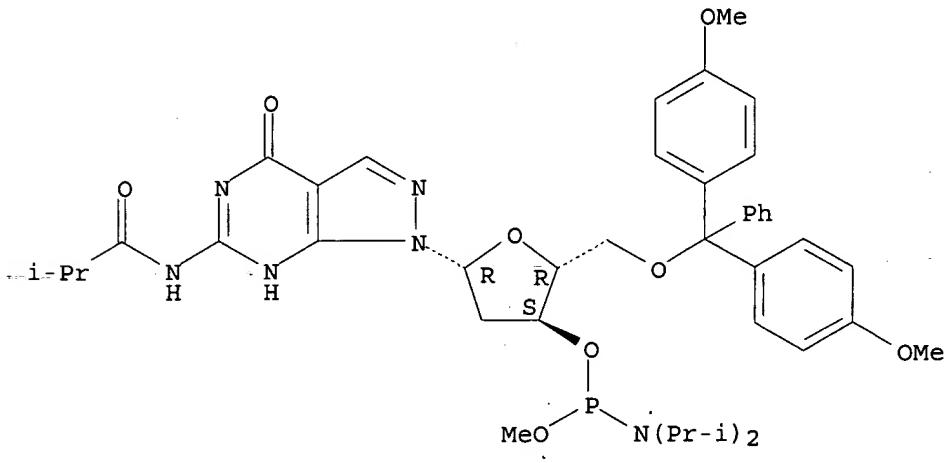
AB The synthesis of alternating hexamers derived from d(C-G)3 or d(G-C)3 but contg. c7z8Gd (I, X = N) or c7Gd (I, X = CH) instead of dG is described employing phosphoramidite-chem. Apart from the isobutyryl group, the dimethylaminomethylene residue was used for the nucleobase-protection of I (X = CH). The methyl- and the cyanoethyl-phosphoramidites of I (X = CH) were prepd. They were employed together with those of c7G or c7z8Gd in automated oligonucleotide synthesis. Tm-values as well as thermodn. data of the oligomers indicated that duplexes were destabilized if c7Gd replaced dG, whereas c7z8Gd stabilized the duplex structure. In contrast to d(C-G)3 which underwent salt-dependent B-Z transition, the CD spectra of oligomers contg. c7Gd or c7z8Gd in place of dG showed retained .beta.-conformation.

IT **118907-75-8 118907-76-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(use of, in synthesis of hexanucleotides)

RN 118907-75-8 CAPLUS

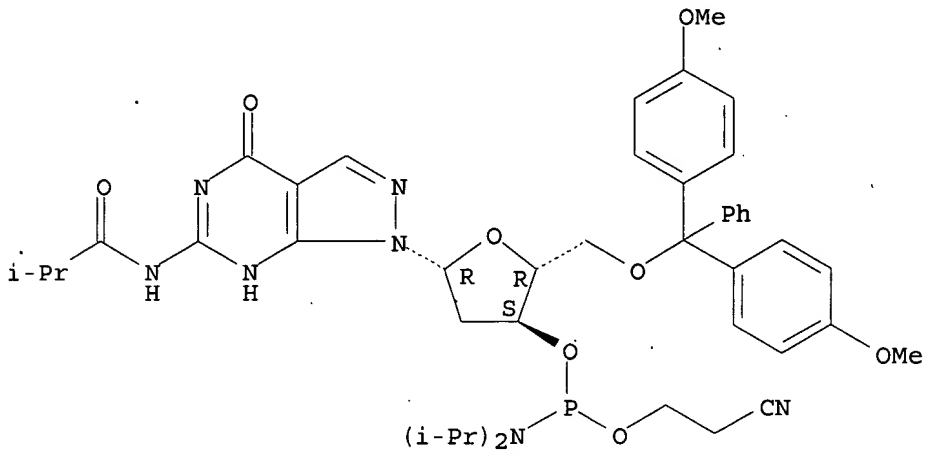
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 118907-76-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

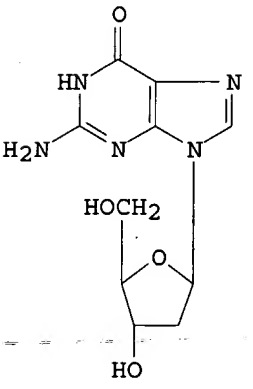
Absolute stereochemistry.



L13 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:	1989:75966 CAPLUS
DOCUMENT NUMBER:	110:75966
TITLE:	8-Aza-7-deaza-2'-deoxyguanosine: phosphoramidite synthesis and properties of octanucleotides
AUTHOR(S):	Seela, Frank; Driller, Hansjuergen
CORPORATE SOURCE:	Lab. Org. Bioorgan. Chem., Univ. Osnabrueck, Osnabrueck, D-4500, Fed. Rep. Ger.
SOURCE:	Helvetica Chimica Acta (1988), 71(5), 1191-8 CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE:	Journal
LANGUAGE:	English
OTHER SOURCE(S):	CASREACT 110:75966

GI



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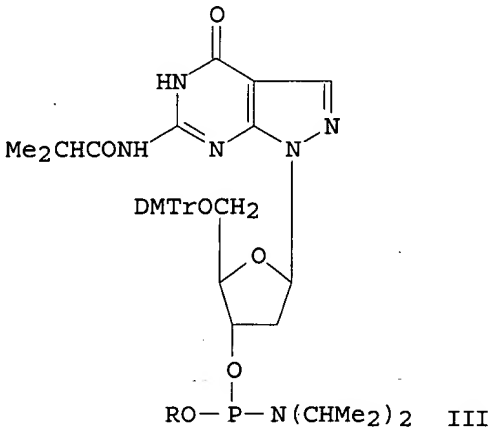


III

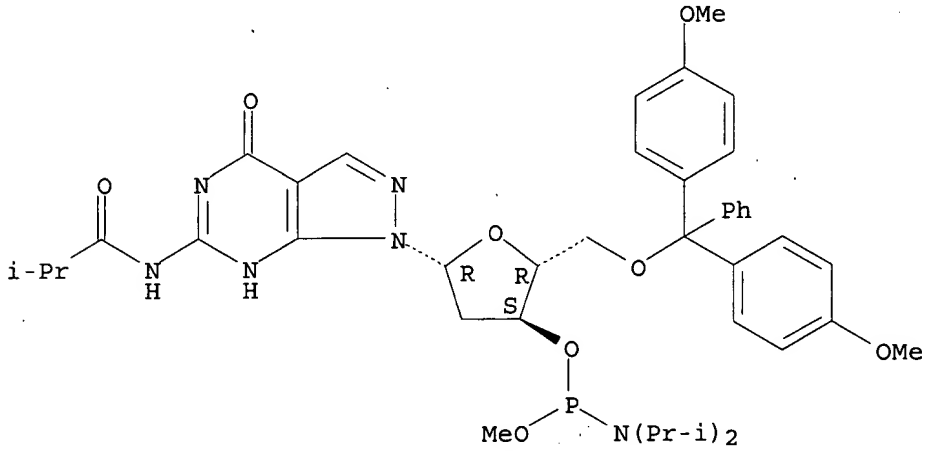
AB Base-modified octanucleotides derived from d(G1-G2-A-A-T-T-C-C) (I) but contg. 8-aza-7-deaza-2'-deoxyguanosine (II) instead of 2'-deoxyguanosine have been prepd. by solid-phase synthesis employing P(III) chem.

Isobutyrylation of II, followed by 4,4'-dimethoxytritylation and subsequent phosphitylation yielded the Me or the cyanoethyl phosphoramidites III [R = Me, (CH2)2CN], resp. They were used as building blocks in automated DNA synthesis. The resulting octanucleotides contg. II showed increased Tm values compared to the parent oligomer I. The oligomers prepd. were employed as sequence-specific probes in endodeoxyribonuclease Eco RI oligonucleotide recognition. Whereas displacement of dG-2 (enzymic cleavage site of I) abolished phosphodiester hydrolysis, replacement of dG-1 enhanced the cleavage rate compared to I.

IT **118907-75-8P 118907-76-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, intermediate in synthesis of octanucleotides)

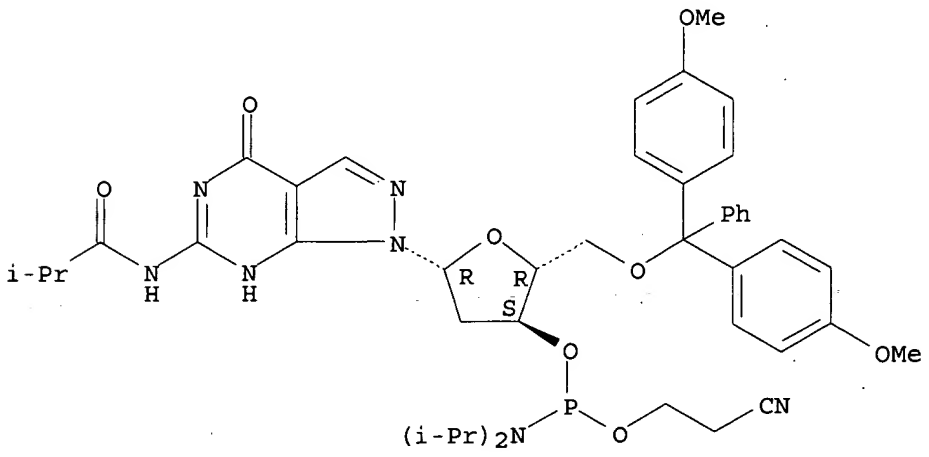
RN 118907-75-8 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino]methoxyphosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

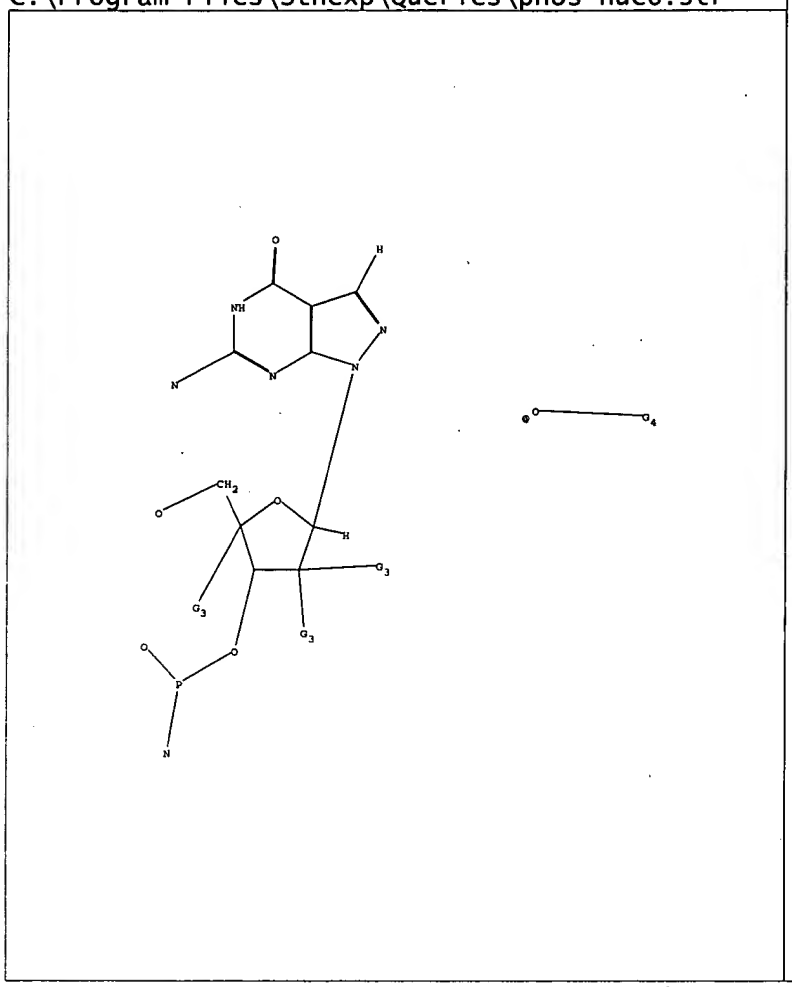


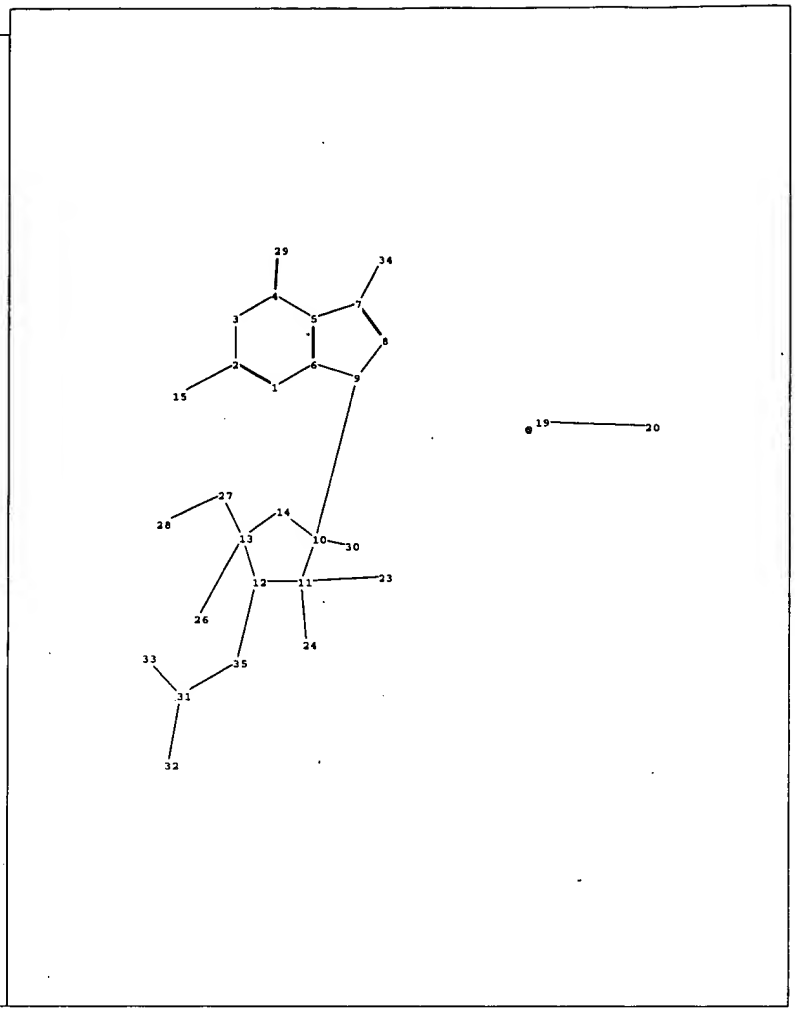
RN 118907-76-9 CAPLUS
CN Propanamide, N-[1-[5-O-[bis(4-methoxyphenyl)phenylmethyl]-3-O-[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]-2-deoxy-.beta.-D-erythro-pentofuranosyl]-4,5-dihydro-4-oxo-1H-pyrazolo[3,4-d]pyrimidin-6-yl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



C:\Program Files\Stnexp\Queries\phos-nuc6.str





chain nodes :
15 19 20 23 24 26 27 28 29 30 31 32 33 34 35
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14
chain bonds :
2-15 4-29 7-34 9-10 10-30 11-23 11-24 12-35 13-26 13-27 19-20 27-28 31-33
31-32 31-35
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 10-11 10-14 11-12 12-13 13-14
exact/norm bonds :
1-2 1-6 2-3 2-15 3-4 4-5 4-29 5-6 5-7 6-9 7-8 8-9 9-10 10-11 10-14 11-12
11-23 11-24 12-13 12-35 13-14 13-26 19-20 31-33 31-32 31-35
exact bonds :
7-34 10-30 13-27 27-28

G1:H,Ak

G2:H,Ak,N

G3:H,X,Ak

G4:H,Ak,O

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:CLASS 19:CLASS 20:CLASS 23:CLASS 24:CLASS 26:CLASS
27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:CLASS 34:CLASS 35:CLASS